# Location of a point on a segment of straight line of endpoints belonging to a circle Theorem

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# Abstract

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## 1 Introduction

IT IS DRAFT/ WORK IN PROGRES BEFORE ITS FINAL CORRECTION OF THE MISTAKES AND THE CONTENT. ITS NOT READY YET TO BE USED FOR ITS PURPOSE AND WILL BE REPLACED BY CORRECTED FINAL VERSION OF IT CONTAINING PROOF OF THIS THEOREM AND DRAWING. (FIRST NON FINAL CORRECTION)

# 2 Location of a point on a segment of a stright line of endpoints belonging to a circle Theorem

Location of a point on a segment of straight line of endpoints belonging to a circle Theorem. Point X belonging to a segment of a straight line a— where each of its two endpoints, belonging to a circle of a radius r and of a center located in a point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees— is located on this segment of the straight line o in such a position that:

- is located in the shortest distance, from among all of the points belonging to a straight line e where:
  - \* to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees, of a segment of this straight line e the point E is the sole point located in the shortest distance from among all of the points belonging to a straight line E being coincident with the radius E of this circle of the center located in the point E, on its length, to which a point belonging to this circle of the radius E and of the center located

in the point O and the center of this circle located in the point O belong,

to the center of this circle of the radius r, located in the point O;

- is located in the shortest distance, from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to a point belonging to:
  - \* the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of a segment of this straight line e the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O belong,
  - \* the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line a belongs;

- is located in the shortest distance, from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to a point belonging to:
  - \* the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of a segment of this straight line e the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O belong,
  - \* the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line a belongs;
- is located in the shortest distance, from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the

point O and the center of this circle located in the point O belong, to a point belonging to:

- \* the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of a segment of this straight line e the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which a point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong.
- \* the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line e belongs;
- is located in the shortest distance, from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to a point belonging to:
  - \* the straight line e where to each of the two endpoints, belonging to

the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees, of a segment of this straight line e the point E is located in the shortest distance from among all of the points belonging to the straight line e being coincident with the radius e of this circle of the center located in the point e0, on its length, to which a point belonging to this circle of the radius e1 and of the center located in the point e2 and the center of this circle located in the point e3 belong.

\* the straight line e<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line e belongs;

#### and that:

- a point being the sole point located in the shortest distance, from among all of the points belonging to a straight line b where:
  - \* to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of a segment of this straight line b the point, located in

the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point X, is located in the shortest distance from among all of the points belonging to the straight line  $a_1$ .

to the center of the circle located in the point O and of the radius r, is the sole point located in the shortest distance, from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line a belongs, to the point X;

- a point being the sole point located in the shortest distance, from among all of the points belonging to a straight line c where:
  - \* to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees.

a segment of this straight line c the point, located in the shortest distance from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point X, is located in the shortest distance from among all of the points belonging to a straight line  $a_2$ .

to the center of the circle located in the point O and of the radius r, is the sole point located in the shortest distance, from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line a belongs, to the point X;

- a point being a sole point located in the shortest distance, from among all of the points belonging to a straight line f where:
  - \* to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater

then or equal to 0 degrees and less than or equal to 180 degrees, of a segment of this straight line f the point, located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints of the segment of the straight line e belonging to this circle of the center located in the point O, belongs, to the point O, is located in the shortest distance from among all of the points belonging to a straight line  $e_1$ ,

to the center of the circle located in the point O and of the radius r, is the sole point located in the shortest distance, from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line e belongs, to the point X;

- a point being the sole point located in the shortest distance, from among all of the points belonging to a straight line f where:
  - \* to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of a central angle of a vertex located in the

point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of a segment of this straight line f the point, located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints of the segment of the straight line e belonging to this circle of the center located in the point O, belongs, to the point X, is located in the shortest distance from among all of the points belonging to a straight line  $e_1$ .

to the center of the circle located in the point O and of the radius r, is the sole point located in the shortest distance, from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees to each of which the point belonging to this circle of the center located in the point O and being one of the two endpoints of the segment of the straight line e belongs, to the point X;

where the following eight distances, equal accordingly:

- I. the square root of the sum of:
  - I.I. the square of a segment of the straight line  $a_1$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident

with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line b — is the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O; and where:

#### I.I.I. the point:

I.I.I.I. located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to

the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this straight line O being the sole point located in the shortest distance from among all of the points belonging to the straight line O to the center of this circle of the radius O, located in the point O;

#### I.I.II. the point O:

I.I.II.I. belonging to this straight line  $a_1$  and being located in the center of this circle of the radius r;

are endpoints of this segment, of the straight line  $a_1$ , of the length equal to the difference of:

1. the square of a segment of the straight line  $a_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then

or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X— located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O— is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong; and where

#### 1.1. the point:

1.1.1 belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 1.2. the point O:

1.2.1. belonging to the straight line  $a_1$  and being located in the

center of this circle of the radius r; are endpoints of this segment of the straight line  $a_1$ ;

2. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $a_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

#### 2.1. the point:

2.1.1. belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center

located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this  $straight\ line\ e\ -\ the\ point\ X\ -\ located\ in\ the\ shortest$ distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 2.2. the point X:

2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub>

- and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- 2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and

with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

#### 2.2.3.2. the point:

- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.2.2. belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two

- endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,
- 2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line b — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line e;

3. the square of a segment of the straight line b where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b, the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line b to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $a_1$ , and where:

#### 3.1. the point:

3.1.1. located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight

line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b; being located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

#### 3.2. the point X:

- 3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of

the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- 3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

#### 3.2.3.2. the point:

3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment

- of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,
- 3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line b— where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b— to the center of this circle of the radius r, located in the point O—

is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs:

are endpoints of this segment of the straight line b;

I.II. the square of a segment of the straight line b where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b, the point — located in the shortest distance from among all of the points belonging to the straight line a<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point X and located in the shortest distance from among all of the

points belonging to this straight line b to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $a_1$ , and where:

### I.II.I. the point:

I.II.I. located in the shortest distance from among all of the points belonging to the straight line a<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b; being located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

#### I.II.II. the point X:

I.II.II. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;

- I.II.II. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- I.II.III. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- I.II.III.II. each of the two endpoints, belonging to the circle of
  the radius r and of the center located in the point O
  and to one of its two radiuses r being, on their lengths,
  coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides
  of the central angle of the vertex located in the point

O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

#### I.II.II.III.II. the point:

I.II.II.III.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

I.II.III.III. III. belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,

I.II.II.IV. to which the point being the sole point located in the short-

est distance from among all of the points belonging to the straight line b — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line b

#### II. the square root of the sum of:

II.I. the square of a segment of the straight line  $a_2$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and

of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line O, belongs — to the point O and to each of the two endpoints — belonging to the circle of the radius O and of the center located in the point O and to one of its two radiuses O being, on their lengths, coincident with straight lines O and O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to O degrees — of the segment of the straight line O is the sole point located in the shortest distance from among all of the points belonging to the straight line O to the center of this circle of the radius O, located in the point O; and where :

#### II.I.I. the point:

II.I.I. located in the shortest distance from among all of the points belonging to the straight line a being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of

greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c—being the sole point located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;

#### II.I.II. the point O:

II.I.II.I. belonging to this straight line  $a_2$  and being located in the center of this circle of the radius r;

are endpoints of this segment, of the straight line  $a_2$ , of the length equal to the difference of:

1. the square of a segment of the straight line  $a_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance

from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong; and where

#### 1.1. the point:

1.1.1 belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 1.2. the point O:

- 1.2.1. belonging to the straight line  $a_2$  and being located in the center of this circle of the radius r;
- are endpoints of this segment of the straight line  $a_2$ ;
- 2. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses

r being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $a_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

#### 2.1. the point:

2.1.1. belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the

measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this  $straight\ line\ e-the\ point\ X-located\ in\ the\ shortest$ distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 2.2. the point X:

- 2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the

points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
  - 2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

#### 2.2.3.2. the point:

- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.2.2. belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,
- 2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belong-

ing to the straight line c — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line e;

3. the square of a segment of the straight line c where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines c<sub>1</sub> and c<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c, the point — located in the shortest distance from among all of the points

belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point a and located in the shortest distance from among all of the points belonging to this straight line a to the center of this circle of the radius a, located in the point a is located in the shortest distance from among all of the points belonging to the straight line a, and where:

#### 3.1. the point:

3.1.1. located in the shortest distance from among all of the points belonging to the straight line a being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c; being located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;

## 3.2. the point X:

- 3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in

- the point O belong to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- 3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

### 3.2.3.2. the point:

3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belong-

- ing to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,
- 3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line c — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on

their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line c;

II.II. the square of a segment of the straight line c where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c, the point — located in the shortest distance from among all of the points belonging to the straight line a<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line c to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $a_2$ , and where:

II.II.I. the point:

II.II.I. located in the shortest distance from among all of the points belonging to the straight line a2 being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c; being located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;

## II.II.II. the point X:

II.II.II belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
the central angle of the vertex located in the point O being
the center of this circle and of the measure of greater then
or equal to 0 degrees and less than or equal to 90 degrees;

II.II.II. located in the shortest distance from among all of the

points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- II.II.III. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- II.II.III.II. each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

II.II.II.III.II the point:

II.II.III.II.I belonging to the straight line e where to each of the

two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line e being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- II.II.III.III. belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,
- II.II.II. IV to which the point being the sole point located in the shortest distance from among all of the points belonging to the
  straight line c where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being,
  on their lengths, coincident with straight lines c<sub>1</sub> and c<sub>2</sub>

and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line c

#### III. the square root of the sum of:

III.I. the square of a segment of the straight line  $e_1$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius

r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line b — is the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O; and where :

## III.I.I. the point:

III.I.I. located in the shortest distance from among all of the points belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the

point O;

#### III.I.II. the point O:

III.I.II. belonging to this straight line  $e_1$  and being located in the center of this circle of the radius r;

are endpoints of this segment, of the straight line  $e_1$ , of the length equal to the difference of:

1. the square of a segment of the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point

O belong; and where

#### 1.1. the point:

1.1.1 belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X-located in the shortest distance from among all ofthe points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 1.2. the point O:

- 1.2.1. belonging to the straight line  $e_1$  and being located in the center of this circle of the radius r;
- are endpoints of this segment of the straight line  $e_1$ , of the length being equal to the length of the radius r of this circle of the center located in the point O;
- 2. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure

of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

#### 2.1. the point:

2.1.1. belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center

located in the point O, of the segment of the straight line e, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e — the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 2.2. the point X:

- 2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to

one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
  - 2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;
- 2.2.3.2. the point:
- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius

r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- 2.2.3.2.2. belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,
- 2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line f where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its

two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line e;

3. the square of a segment of the straight line f where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines f<sub>1</sub> and f<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f, the point — located in the shortest distance from among all of the points belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center

located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line b to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $e_1$ , and where:

## 3.1. the point:

3.1.1. located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees,

of the segment of this straight line f; being located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

## 3.2. the point X:

- 3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the

points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:

3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

# 3.2.3.2. the point:

3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- 3.2.3.2.2. belonging to the straight line e<sub>1</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,
- 3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less

than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line f;

III.II. the square of a segment of the straight line f where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f, the point — located in the shortest distance from among all of the points belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line f to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $e_1$ , and where:

### III.II.I. the point:

III.II.I. located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of

this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f; being located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

#### III.II.II. the point X:

- III.II.II. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
  center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
  coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
  the central angle of the vertex located in the point O being
  the center of this circle and of the measure of greater then
  or equal to 0 degrees and less than or equal to 90 degrees;
- III.II.II located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with

straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- III.II.III located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- III.II.II.I. each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

### III.II.II.III.II. the point:

III.II.III.III.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the

the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- III. II. III. III. III. belonging to the straight line e<sub>1</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,
- III.II.IV. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line f where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this

straight line f — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line f

### IV. the square root of the sum of:

IV.I. the square of a segment of the straight line  $e_2$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure

of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line g — is the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O; and where :

# IV.I.I. the point:

IV.I.I. located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point 0;

#### IV.I.II. the point O:

IV.I.II.I. belonging to this straight line  $e_2$  and being located in the center of this circle of the radius r;

are endpoints of this segment, of the straight line  $e_2$ , of the length equal to the difference of:

1. the square of a segment of the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong; and where

## 1.1. the point:

1.1.1 belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

# 1.2. the point O:

- 1.2.1. belonging to the straight line  $e_2$  and being located in the center of this circle of the radius r;
- are endpoints of this segment of the straight line  $e_2$ , of the length being equal to the length of the radius r of this circle of the center located in the point O;
- 2. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line e<sub>2</sub> being coincident with one of the two radiuses r of

the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

## 2.1. the point:

2.1.1. belonging to the straight line e2 being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e1 and e2 and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r

being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e— the point X— located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius e, located in the point e0— is located in the shortest distance from among all of the points belonging to the straight line e1 being coincident with the radius e2 of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius e3 and of the center located in the point O and the center of this circle located in the point O belong;

### 2.2. the point X:

- 2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater

then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- 2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## 2.2.3.2. the point:

2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in

the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- 2.2.3.2.2. belonging to the straight line e2, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e1 and e2 and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,
- 2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line g where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or

equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line e2, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line e;

3. the square of a segment of the straight line g where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and g<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g, the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and

less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line b to the center of this circle of the radius r, located in the point O— is located in the shortest distance from among all of the points belonging to the straight line  $e_2$ , and where:

## 3.1. the point:

3.1.1. located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g; being located in the shortest distance from among all of the points belonging to the straight line q to the center of this circle of the radius r, located in the point O;

- 3.2. the point X:
- 3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in

the point O and the center of this circle located in the point O belong, to:

3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

# 3.2.3.2. the point:

- 3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line e<sub>2</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in

the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line e2, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line g;

IV.II. the square of a segment of the straight line g where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g, the point — located in the shortest distance from among all of the points belonging to the straight line e<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line g to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $e_2$ , and where:

#### IV.II.I. the point:

IV.II.I. located in the shortest distance from among all of the points belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure

of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g; being located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

## IV.II.II. the point X:

- IV.II.II. I belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
  center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
  coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
  the central angle of the vertex located in the point O being
  the center of this circle and of the measure of greater then
  or equal to 0 degrees and less than or equal to 90 degrees;
- IV.II.II. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment

of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- IV.II.III located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- IV.II.III.II. each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## IV.II.II.III.II the point:

IV.II.III.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the

point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

IV.II.III.III. belonging to the straight line e<sub>1</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

IV.II.II.IV. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the cir-

cle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line g

# V. the square root of the difference of:

V.I. the square of a segment of the straight line  $a_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points

belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong; and where

# V.I.I. the point:

V.I.I.I. belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

# V.I.II. the point O:

V.I.II.I. belonging to the straight line  $a_1$  and being located in the center of this circle of the radius r;

are endpoints of this segment of the straight line  $a_1$  of the length equal to the sum of:

1. the square of a segment of the straight line  $a_1$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  — being coincident with one of the two radiuses r of the circle of

the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line b — is the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O; and where:

#### 1.1. the point:

1.1.1. located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two

endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

# 1.2. the point O:

- 1.2.1. belonging to this straight line  $a_1$  and being located in the center of this circle of the radius r;
- are endpoints of this segment, of the straight line  $a_1$ :
- 2. the square of a segment of the straight line b where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b, the point located in the shortest distance from among all of the points belonging to the straight line a<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in

the point O, of the segment of the straight line a, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line b to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $a_1$ , and where:

# 2.1. the point:

2.1.1. located in the shortest distance from among all of the points belonging to the straight line a<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b; being located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

# 2.2. the point X:

2.2.1. belonging to the straight line a where each of the two

- endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:

2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

#### 2.2.3.2. the point:

- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.2.2. belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the cen-

tral angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,

2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line b — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line b;

3. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $a_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

#### 3.1. the point:

3.1.1. belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on

their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this  $straight\ line\ e-the\ point\ X-located\ in\ the\ shortest$ distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 3.2. the point X:

3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the

- measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
  - 3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of

the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

# 3.2.3.2. the point:

- 3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight

line a, belongs,

3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line b — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line e;

V.II. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal

to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $a_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

#### V.II.I. the point:

V.II.I.I. belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to which as to each of the two endpoints, belonging to the circle

of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e — the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### V.II.II. the point X:

- V.II.II. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
  center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
  coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
  the central angle of the vertex located in the point O being
  the center of this circle and of the measure of greater then
  or equal to 0 degrees and less than or equal to 90 degrees;
- V.II.II. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 de-

grees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- V.II.III. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- V.II.II.II. each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

# V.II.II.III.II. the point:

V.II.II.III.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to

90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- V.II.II.III.II. belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,
- V.II.II.IV. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line b where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line a<sub>1</sub>,

being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line e;

# VI. the square root of the difference of:

VI.I. the square of a segment of the straight line  $a_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O —

is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong; and where

# VI.I.I. the point:

VI.I.I. I. belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

### VI.I.II. the point O:

VI.I.II.I. belonging to the straight line  $a_2$  and being located in the center of this circle of the radius r;

are endpoints of this segment of the straight line  $a_2$  of the length equal to the sum of:

1. the square of a segment of the straight line  $a_2$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  —

being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line b — is the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O; and where:

### 1.1. the point:

1.1.1. located in the shortest distance from among all of the points belonging to the straight line a2 being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a1 and a2 and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight

line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this straight line C — being the sole point located in the shortest distance from among all of the points belonging to the straight line C to the center of this circle of the radius r, located in the point O:

## 1.2. the point O:

- 1.2.1. belonging to this straight line  $a_2$  and being located in the center of this circle of the radius r;
- are endpoints of this segment, of the straight line  $a_2$ :
- 2. the square of a segment of the straight line c where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and c<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b, the point located in the shortest distance from among all of the points belonging to the straight line a<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the

two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line c to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line  $a_2$ , and where:

# 2.1. the point:

2.1.1. located in the shortest distance from among all of the points belonging to the straight line a being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c; being located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;

#### 2.2. the point X:

- 2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the

point O belong, to:

2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## 2.2.3.2. the point:

- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.2.2. belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with

straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,

2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line c — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line c;

3. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $a_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

#### 3.1. the point:

3.1.1. belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of

this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this  $straight\ line\ e\ -\ the\ point\ X\ -\ located\ in\ the\ shortest$ distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

### 3.2. the point X:

3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located

- in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
  - 3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located

in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## 3.2.3.2. the point:

- 3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center lo-

cated in the point O, of the segment of the straight line a, belongs,

3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line c — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line a2, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line e;

VI.II. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being

the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $a_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

# VI.II.I. the point:

VI.II.I. belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to which

as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e — the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

## VI.II.II. the point X:

- VI.II.II. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
  center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
  coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
  the central angle of the vertex located in the point O being
  the center of this circle and of the measure of greater then
  or equal to 0 degrees and less than or equal to 90 degrees;
- VI.II.II. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this

circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O:

- VI.II.III. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- VI.II.III.I. each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## VI.II.II.III.II. the point:

VI.II.III.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater

then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

VI.II.III.III. belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs,

VI.II.II.V. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line c — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines c<sub>1</sub> and c<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form

among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

are endpoints of this segment of the straight line e;

# VII. the square root of the difference of:

VII.I. the square of a segment of the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and <sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to

the center of this circle of the radius r, located in the point O—
is located in the shortest distance from among all of the points
belonging to the straight line d being coincident with the radius rof this circle of the center located in the point O, on its length, to
which the point belonging to this circle of the radius r and of the
center located in the point O and the center of this circle located
in the point O belong; and where

# VII.I.I. the point:

VII.I.I.I. belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

### VII.I.II. the point O:

VII.I.II. belonging to the straight line  $e_1$  and being located in the center of this circle of the radius r;

are endpoints of this segment of the straight line  $e_1$ , of the length being equal to the length of the radius r of the circle of the center located in the point O being equal to the sum of:

1. the square of a segment of the straight line  $e_1$  where the point

being the sole point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line f — is the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O; and where:

#### 1.1. the point:

1.1.1. located in the shortest distance from among all of the points belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of

the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to 180 degrees, of the segment of this straight line f — being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

### 1.2. the point O:

- 1.2.1. belonging to this straight line  $e_1$  and being located in the center of this circle of the radius r; are endpoints of this segment, of the straight line  $e_1$ :
- 2. the square of a segment of the straight line f where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines f<sub>1</sub> and f<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c, the point located in the shortest distance from among all of the points belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the center of this circle

and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line f to the center of this circle of the radius f, located in the point f is located in the shortest distance from among all of the points belonging to the straight line f, and where:

## 2.1. the point:

2.1.1. located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f; being located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle

of the radius r, located in the point O;

- 2.2. the point X:
- 2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging

to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:

2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## 2.2.3.2. the point:

- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.2.2. belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two

radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line

e, belongs;

are endpoints of this segment of the straight line f;

- 3. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:
  - 3.1. the point:
  - 3.1.1. belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center

located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this  $straight\ line\ e\ -\ the\ point\ X\ -\ located\ in\ the\ shortest$ distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

## 3.2. the point X:

3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub>

- and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- 3.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and

with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

# 3.2.3.2. the point:

- 3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line e<sub>1</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two end-

points, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line e;

VII.II. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with

sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

## VII.II.I. the point:

VII.II.I. belonging to the straight line e<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O,

of the segment of the straight line e, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e — the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

# VII.II.II. the point X:

- VII.II.II. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
  center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
  coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
  the central angle of the vertex located in the point O being
  the center of this circle and of the measure of greater then
  or equal to 0 degrees and less than or equal to 90 degrees;
- VII.II.II. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle

of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

VII.II.III. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:

VII.II.II.I. each of the two endpoints, belonging to the circle of
the radius r and of the center located in the point O
and to one of its two radiuses r being, on their lengths,
coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides
of the central angle of the vertex located in the point
O being the center of this circle and of the measure of
greater then or equal to 0 degrees and less than or equal
to 90 degrees, of the segment of this straight line e;

## VII.II.II.III.II. the point:

VII.II.III.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being

the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

VII.II.III.III. belonging to the straight line e<sub>1</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

VII.II.IV. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this straight line f — to the center of this circle of the radius

r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to O degrees and less than or equal to O degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line e;

# VIII. the square root of the difference of:

VIII.I. the square of a segment of the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — where to the point belonging to the straight line e as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance

from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O— is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong; and where

# VIII.I.I. the point:

VIII.I.I. belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

# VIII.I.II. the point O:

VIII.I.II. belonging to the straight line  $e_2$  and being located in the center of this circle of the radius r;

are endpoints of this segment of the straight line  $e_2$ , of the lenght being equal to the lenght of the radius r of the circle of the center located in the point O, being equal to the sum of: 1. the square of a segment of the straight line  $e_2$  where the point being the sole point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees — of the segment of the straight line g — is the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O; and where:

## 1.1. the point:

1.1.1. located in the shortest distance from among all of the points belonging to the straight line e<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and

less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

# 1.2. the point O:

- 1.2.1. belonging to this straight line  $e_2$  and being located in the center of this circle of the radius r;
- are endpoints of this segment, of the straight line  $e_2$ :
- 2. the square of a segment of the straight line g where to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines g<sub>1</sub> and g<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g, the point—located in the shortest distance from among all of the points belonging to the straight line e<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of

the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, to the point X and located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius e, located in the point e is located in the shortest distance from among all of the points belonging to the straight line  $e_2$ , and where:

#### 2.1. the point:

2.1.1. located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line q; being located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

## 2.2. the point X:

- 2.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 2.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 2.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in

the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:

2.2.3.1 each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## 2.2.3.2. the point:

- 2.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.2.2. belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the

center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

2.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line g;

3. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

## 3.1. the point:

3.1.1. belonging to the straight line  $e_2$  being coincident with

one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$ and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this  $straight\ line\ e\ -\ the\ point\ X\ -\ located\ in\ the\ shortest$ distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### 3.2. the point X:

3.2.1. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on

- their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees;
- 3.2.2. located in the shortest distance from among all of the points belonging to the straight line e — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;
- 3.2.3. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- 3.2.3.1 each of the two endpoints, belonging to the circle of
  the radius r and of the center located in the point
  O and to one of its two radiuses r being, on their

lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## 3.2.3.2. the point:

- 3.2.3.2.1. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 3.2.3.2.2. belonging to the straight line e<sub>2</sub>, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal

to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

3.2.4. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$ and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line e;

VIII.II. the square of a segment of the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being,

on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e and to the point, belonging to this straight line e and to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs — the point X — located in the shortest distance from among all of the points belonging to this straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, and where:

## VIII.II.I. the point:

VIII.II.I. belonging to the straight line e<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints,

belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e — the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

#### VIII.II. II. the point X:

- VIII.II.I. belonging to the straight line a where each of the two endpoints, belonging to the circle of the radius r and of the
  center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths,
  coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of
  the central angle of the vertex located in the point O being
  the center of this circle and of the measure of greater then
  or equal to 0 degrees and less than or equal to 90 degrees;
- VIII.II.II. located in the shortest distance from among all of the points belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with

straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong — to the center of this circle of the radius r, located in the point O;

- VIII.II.III. located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, to:
- VIII.II.II. each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e;

## VIII.II.II.III. the point:

VIII.II.II.II. belonging to the straight line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines e<sub>1</sub> and e<sub>2</sub> and with sides of the

the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

VIII. II. III. III. III. belonging to the straight line e2, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e1 and e2 and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs,

VIII.II.IV. to which the point being the sole point located in the shortest distance from among all of the points belonging to the straight line g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then or equal to O degrees and less than or equal to O degrees, of the segment of this straight line

g — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line e2, being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines e1 and e2 and with sides of the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

are endpoints of this segment of the straight line e;

are constant and equal to the distance in which the point X is located to the center of the circle of the radius r located in the point O.

# 3 Proof of Location of a point on a segment of straight line of endpoints belonging to a circle Theorem

Proof of Location of a point on a segment of straight line of endpoints belonging to a circle Theorem. To prove Location of a point on a segment of straight line of endpoints belonging to a circle Theorem I created the following two theorems:

I. Location of a point on perpendicular lines Theorem;

Location of a point on a segment of straight line of endpoints belonging to a circle Theorem (Proof of Location of a point on perpendicular lines a and b Theorem). Point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a located in the shortest distance Z to the point not

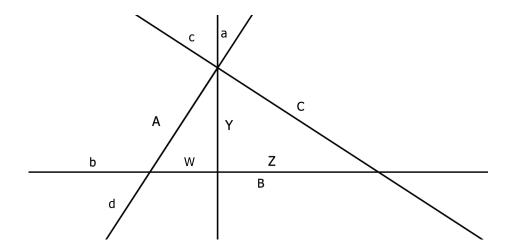


Figure 1: Location of the points on perpendicular lines

belonging to this straight line a but belonging to the straight line b, is located on perpendicular lines a and b.

Proof of Location of a point on perpendicular lines a and b Theorem. The points located:

- in the same distance from the point not belonging to striaght line a but belonging to straight line b belong to the circle of the center located in the point not belonging to striaght line a but belonging to straight line b and radius equal to the destance between point belonging to the straight line b and straight line a and the point not belonging to this straight line a but belonging to the stright line b;
- 2. in the shorter distance from the point not belonging to striaght line a but belonging to straight line b are located inside the circle of the center located in the point not belonging to striaght line a but belonging to straight line b and radius equal to the destance between point belonging to the straight line b and straight line a and the point not belonging to this straight line a but belonging to the stright line b;
- 3. in the longer distance from the point not belonging to striaght line a but belonging to straight line b are located outside the circle of

the center located in the point not belonging to striaght line a but belonging to straight line b and radius equal to the destance between point belonging to the straight line b and straight line a and the point not belonging to this straight line a but belonging to the stright line b.

Straight line a being inclined at the different than 90 degree angle to the straight line b contains two points belonging to the circle of the center located in the point not belonging to straight line a but belonging to straight line b and radius equal to the destance between point belonging to the straight line b and straight line a and the point not belonging to this straight line a but belonging to the stright line a. Therefore theorem is true.

II. Location of a point, other than the point located on perpendicular lines a and b, on perpendicular lines c and d Theorem.

Location of a point on a segment of straight line of endpoints belonging to a circle Theorem (Location of a point, other than the point located on perpendicular lines a and b, on perpendicular lines c and d Theorem.). Point belonging to the straight line a — being other point than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a located in the shortest distance:

- 1. Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b;
- 2. W to the point not belonging to this straight line a but belonging to the straight line b abd d, being located on perpendicular lines a and b

to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a located in the shortest distance:

- 1. Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b:
- 2. W to the point not belonging to this straight line a but belonging to the straight line b abd d, being located on perpendicular lines a and b

is located in the shortest distance Y from among all of the points belonging to the straight line b—belongs accordingly to the straight lines:

- 1. c to which the point not belonging to the straight line a but belonging to the stright line b also belongs;
- 2. d to which the point not belonging to the straight line a but belonging to the stright line b also belongs;

# being accordingly:

- 1. the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point not belonging to the straight line a but belonging to the straight lines b and c
- 2. the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b but not belonging to the straight lines a and c

is located on perpendicular lines c and d where the square of the distance B in which the following points:

### 1. the point:

- 1.1. belonging to the straight line b and d but not belonging to the straight lines a and c to which the point:
  - 1.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b

to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b;

1.1.2. being the sole point from among all of the points belonging to the straight line d located in the shortest distance C to the point not belonging to the straight line a but belonging to the straight lines b and c;

is the sole point located in the shortest distance A from among all of the points belonging to the straight line c;

### 2. the point:

- 2.1. not belonging to the straight line a but belonging to the straight lines b and c to which the point:
  - 2.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
  - 2.1.2. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance
    A to the point belonging to the straight line b but not belonging to the straight lines a and c

is the sole point located in the shortest distance C from among all of the points belonging to the straight line d,

are located to each other, being equal to:

- 1. the sum of the squares of:
  - 1.1. the shortest distance Z in which:
    - 1.1.1. the point:
    - 1.1.1.1. belonging to the straight line b,
    - 1.1.1.2. being the sole point from among all of the points belonging to the straight line a

is located to:

- 1.1.2. the point:
- 1.1.2.1. not belonging to the straight line a but belonging to the straight lines b and c to which the point:
- 1.1.2.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
- 1.1.2.1.2. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line

b and d but not belonging to the straight lines a and c

is the sole point located in the shortest distance C from among all of the points belonging to the straight line d,

- 1.2. the shortest distance A in which:
  - 1.2.1. the point:
  - 1.2.2.1. not belonging to the straight line a but belonging to the straight lines b and d to which the point:
  - 1.2.2.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
  - 1.2.2.1.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d

is the sole point located in the shortest distance A from among all of the points belonging to the straight line c, is located to:

- 1.2.2. the point:
- 1.2.2.1. belonging to the straight line a other than the point

belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,

- 1.2.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 1.2.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c
- 1.3. the shortest distance Y in which:
  - 1.3.1. the point:
  - 1.3.1.1. belonging to the straight line a,
  - 1.3.1.2. the sole point from among all of the points belonging to the straight line b,

is located to:

- 1.3.2. the point:
- 1.3.2.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to

the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,

- 1.3.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 1.3.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c
- 2. the sum of the squares of:
  - 2.1. the shortest distance W in which:
    - 2.1.1. the point:
    - 2.1.1.1. belonging to the straight line b,
    - 2.1.1.2. being the sole point from among all of the points belonging to the straight line a

is located to:

- 2.1.2. the point:
- 2.1.2.1 not belonging to the straight line a but belonging to the straight lines b and d to which the point:
- 2.1.2.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on per-

pendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,

2.1.2.1.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d

is the sole point located in the shortest distance A from among all of the points belonging to the straight line c,

- 2.2. the shortest distance C in which:
  - 2.2.1. the point:
  - 2.2.1.1. not belonging to the straight line a but belonging to the straight lines b and c to which the point:
  - 2.2.1.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y

from among all of the points belonging to the straight line b.

2.2.1.1.2. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance C to the point belonging to the straight line b and d but not belonging to the straight lines a and c

is the sole point located in the shortest distance A from among all of the points belonging to the straight line d, is located to:

## 2.2.2. the point:

- 2.2.2.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
- 2.2.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 2.2.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c

- 2.3. the shortest distance Y in which:
  - 2.3.1. the point:
  - 2.3.1.1. belonging to the straight line a,
  - 2.3.1.2. the sole point from among all of the points belonging to the straight line b,

is located to:

- 2.3.2. the point:
- 2.3.2.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
- 2.3.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 2.3.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c

is equal accordingly to:

- 1. the sum of the squares of:
  - 1.1. the shortest distance C in which:

### 1.1.1. the point:

- 1.1.1.1. not belonging to the straight line a but belonging to the straight lines b and c to which the point:
- 1.1.1.1.1 belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
- 1.1.1.1.2. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance C to the point belonging to the straight line b and d but not belonging to the straight lines a and

is the sole point located in the shortest distance A from among all of the points belonging to the straight line d, is located to:

### 1.1.2. the point:

1.1.2.1. belonging to the straight line a — other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicu-

lar lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,

- 1.1.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 1.1.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c
- 1.2. the shortest distance A in which:
  - 1.2.1. the point:
  - 1.2.2.1. not belonging to the straight line a but belonging to the straight lines b and d to which the point:
  - 1.2.2.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y

from among all of the points belonging to the straight line b.

1.2.2.1.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d

is the sole point located in the shortest distance A from among all of the points belonging to the straight line c, is located to:

### 1.2.2. the point:

- 1.2.2.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
- 1.2.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 1.2.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c

- 2. the sum of the squares of:
  - 2.1. the shortest distance A in which:
    - 2.1.1. the point:
    - 2.1.1.1. not belonging to the straight line a but belonging to the straight lines b and d to which the point:
    - 2.1.1.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
    - 2.1.1.1.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d

is the sole point located in the shortest distance A from among all of the points belonging to the straight line c, is located to:

- 2.1.2. the point:
- 2.1.2.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point

not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,

- 2.1.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 2.1.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c
- 2.2. the shortest distance C in which:
  - 2.2.1. the point:
  - 2.2.1.1. not belonging to the straight line a but belonging to the straight lines b and c to which the point:
  - 2.2.1.1.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the

straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,

2.2.1.1.2. being the sole point, from among all of the points belonging to the straight line c, located in the shortest distance C to the point belonging to the straight line b and d but not belonging to the straight lines a and c

is the sole point located in the shortest distance A from among all of the points belonging to the straight line d, is located to:

### 2.2.2. the point:

- 2.2.2.1. belonging to the straight line a other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c, being located on perpendicular lines a and b to which the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a, being located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b and c being located on perpendicular lines a and b, is located in the shortest distance Y from among all of the points belonging to the straight line b,
- 2.2.2.2. being the sole point, from among all of the points belonging to the straight line d, located in the shortest distance C to the point belonging to the straight line b and c but not belonging to the straight lines a and d
- 2.2.2.3. being the sole point, from among all of the points belonging to the straight line c, located in the shortest

distance A to the point belonging to the straight line b and d but not belonging to the straight lines a and c

according to the following formulas accordingly:

1. 
$$B^2 = C^2 + A^2 = Z^2 + A^2 + Y^2$$

2. 
$$B^2 = C^2 + A^2 = W^2 + C^2 + Y^2$$

Location of a point, other than the point located on perpendicular lines a and b, on perpendicul According to proved by me that: "Point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b, is located on perpendicular lines a and b." [ODSYLACZ] Point belonging to the straight line a — other than the point belonging to the straight line b, being the sole point from among all of the points belonging to the straight line a located in the shortest distance Z to the point not belonging to this straight line a but belonging to the straight line b, being located on perpendicular lines a and b — belonging to the straight line a belonging to the straight line a located in the shortest distance C to the point not belonging to this straight lines a and a but belonging to the straight line a located in the shortest distance C to the point not belonging to this straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to the straight lines a and a but belonging to a belonging to the straight lines a and a but belonging to a but a belonging to a belonging to

The distance  $B^2$  according to proved by Euclid that: "In right-angled triangles, the square on the side subtending the right-angle is equal to the (sum of the) squares on the sides containing the right-angle" [?, Proposition 1.47] equals  $B^2 = C^2 + A^2$  and according to me equals:

1. 
$$B^2 = Z^2 + A^2 + Y^2$$

2. 
$$B^2 = W^2 + C^2 + Y^2$$

I equate the right hand side of this equations:  $C^2 + A^2$ ;  $Z^2 + A^2 + Y^2$ ;  $W^2 + C^2 + Y^2$  and algebraically prove that following algebraic expressions are equal:  $C^2 + A^2 = Z^2 + A^2 + Y^2 = W^2 + C^2 + Y^2$ . According to proved by Euclid that: "In right-angled triangles, the square on the side subtending the right-angle is equal to the (sum of the)

squares on the sides containing the right-angle" [?, Proposition 1.47] from the following equation  $(B-W)^2 + (\sqrt{A^2 - W^2})^2 = C^2$  the searching distance W equals  $W = \frac{C^2 - B^2 - A^2}{-2B}$  and from the following equation  $(B-W)^2 + Y^2 = C^2$  and  $W = \frac{C^2 - B^2 - A^2}{-2c}$  the searching distance  $Y^2$  equals  $Y^2 = C^2 - (B - \frac{C^2 - B^2 - A^2}{-2B})^2$ .

Ad 1 According to proved by Euclid that: "In right-angled triangles, the square on the side subtending the right-angle is equal to the (sum of the) squares on the sides containing the right-angle" [?, Proposition 1.47] the searching distance  $Z^2$  equals  $Z^2 = C^2 - Y^2$  and according to me the searching distance  $Z^2$  equals  $Z^2 = B^2 - A^2 - Y^2$ . I equate the right hand sides of this two equations and making use of the above equations I prove that the following equation:  $C^2 - Y^2 = B^2 - A^2 - Y^2$ 

$$C^2 - \left[C^2 - \left(B^2 - \frac{C^2 - B^2 - A^2}{-2B}\right)^2\right] = B^2 - A^2 - \left[C^2 - \left(B - \frac{C^2 - B^2 - A^2}{-2B}\right)^2\right]$$

$$\begin{split} C^2 - [C^2 - (B^2 - 2B\frac{C^2 - B^2 - A^2}{-2B} + (\frac{C^2 - B^2 - A^2}{-2B})^2)] &= B^2 - A^2 - [C^2 - B^2 - 2B\frac{C^2 - B^2 - A^2}{-2B}) + (\frac{C^2 - B^2 - A^2}{-2B})^2 \end{split}$$

$$C^{2} - \left[C^{2} - \left(B^{2} - 2B\frac{C^{2} - B^{2} - A^{2}}{-2B} + \frac{(C^{2} - B^{2})^{2} - 2A^{2}(C^{2} - B^{2}) + A^{4}}{4B^{2}}\right)\right] = B^{2} - A^{2} - \left[C^{2} - \left(B^{2} - 2B\frac{C^{2} - B^{2} - A^{2}}{-2B}\right) + \frac{(C^{2} - B^{2})^{2} - 2A^{2}(C^{2} - B^{2}) + A^{4}}{4B^{2}}\right)\right]$$

$$\begin{split} C^2 - [C^2 - (B^2 - 2B\frac{C^2 - B^2 - A^2}{-2B} + \frac{[(C^2 - B^2) - A^2]^2}{4B^2})] &= B^2 - A^2 - [C^2 - (B^2 - 2B\frac{C^2 - B^2 - A^2}{-2B} + \frac{[(C^2 - B^2) - A^2]^2}{4B^2})] \end{split}$$

$$C^2 - A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2} = B^2 - 2A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2}$$

According to proved by Euclid that: "In right-angled triangles, the square on the side subtending the right-angle is equal to the (sum of the) squares on the sides containing the right-angle" [?, Proposition 1.47]  $C^2 = B^2 - A^2$ 

$$B^2 - A^2 - A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2} = B^2 - A^2 - A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2}$$

$$B^2 - A^2 - Y^2 = B^2 - A^2 - Y^2$$

 $Z^2 = Z^2 \text{ is true. By replaceing } Y^2 \text{ equal to } A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2} \text{ and } Z^2 \text{ equal to } B^2 - A^2 - A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2} \text{ in this equation } C^2 + A^2 = Z^2 + A^2 + Y^2 \text{ I receive the following equation: } C^2 + A^2 = B^2 - A^2 - (A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2}) + A^2 + (A^2 + \frac{[(C^2 - B^2) - A^2]^2}{4B^2}) C^2 + A^2 = B^2 B^2 = B^2 \text{ which is also true;}$ 

Ad 2 According to proved by Euclid that: "In right-angled triangles, the square on the side subtending the right-angle is equal to the (sum of the) squares on the sides containing the right-angle" [?, Proposition 1.47] the searching distance  $W^2$  equals  $W^2 = A^2 - Y^2$  and according to me the searching distance  $W^2$  equals  $W^2 = B^2 - C^2 - Y^2$ . I equate the right hand sides of this two equations and making use of the above equations I prove that the following equation:  $A^2 - Y^2 = B^2 - C^2 - Y^2$ 

$$A^2 - [A^2 - (B^2 - \frac{A^2 - B^2 - C^2}{-2B})^2] = B^2 - C^2 - [A^2 - (B - \frac{A^2 - B^2 - C^2}{-2B})^2]$$

$$\begin{split} A^2 - [A^2 - (B^2 - 2B\frac{A^2 - B^2 - C^2}{-2B} + (\frac{A^2 - B^2 - C^2}{-2B})^2)] &= B^2 - C^2 - [A^2 - B^2 - 2B\frac{A^2 - B^2 - C^2}{-2B}) + (\frac{A^2 - B^2 - C^2}{-2B})^2 \end{split}$$

$$A^{2} - \left[A^{2} - \left(B^{2} - 2B\frac{A^{2} - B^{2} - C^{2}}{-2B} + \frac{(A^{2} - B^{2})^{2} - 2C^{2}(A^{2} - B^{2}) + C^{4}}{4B^{2}}\right)\right] = B^{2} - C^{2} - \left[A^{2} - \left(B^{2} - 2B\frac{A^{2} - B^{2} - C^{2}}{-2B}\right) + \frac{(A^{2} - B^{2})^{2} - 2C^{2}(A^{2} - B^{2}) + C^{4}}{4B^{2}}\right)\right]$$

$$\begin{array}{l} A^2 - [A^2 - (B^2 - 2B\frac{A^2 - B^2 - C^2}{-2B} + \frac{[(A^2 - B^2) - C^2]^2}{4B^2})] = B^2 - C^2 - [A^2 - (B^2 - 2B\frac{A^2 - B^2 - C^2}{-2B} + \frac{[(A^2 - B^2) - C^2]^2}{4B^2})] \end{array}$$

$$A^{2} - C^{2} + \frac{[(A^{2} - B^{2}) - C^{2}]^{2}}{4B^{2}} = B^{2} - 2C^{2} + \frac{[(A^{2} - B^{2}) - C^{2}]^{2}}{4B^{2}}$$

According to proved by Euclid that: "In right-angled triangles, the square on the side subtending the right-angle is equal to the (sum of the) squares on the sides containing the right-angle" [?, Proposition 1.47]  $C^2 = B^2 - A^2$ 

$$B^{2} - C^{2} - C^{2} + \frac{[(A^{2} - B^{2}) - C^{2}]^{2}}{4B^{2}} = B^{2} - C^{2} - C^{2} + \frac{[(A^{2} - B^{2}) - C^{2}]^{2}}{4B^{2}}$$

$$B^2 - C^2 - Y^2 = B^2 - C^2 - Y^2$$

 $\begin{array}{lll} W^2=W^2 \ \mbox{is true. By replaceing $Y^2$ equal to $C^2+\frac{[(A^2-B^2)-C^2]^2}{4B^2}$ and $W^2$ equal to $B^2-C^2-C^2+\frac{[(A^2-B^2)-C^2]^2}{4B^2}$ in this equation $A^2+C^2=W^2+C^2+Y^2$ I receive the following equation: $A^2+C^2=B^2-C^2-(C^2+\frac{[(A^2-B^2)-C^2]^2}{4B^2})+C^2+(C^2+\frac{[(A^2-B^2)-C^2]^2}{4B^2})$ $A^2+C^2=B^2$ $B^2=B^2$ which is also true, therefore: $B^2=C^2+A^2=Z^2+A^2+Y^2=W^2+C^2+Y^2$ }$ 

### Assuming that:

- 1. the segment of the straight line  $a_1$  of the following endpoints:
  - 1.1. the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

1.2. the point O belonging to this straight line  $a_1$  and being located in the center of this circle of the radius r;

is equal to  $Z_{a_1}$ .

- 2. the segment of the straight line  $a_2$  of the following endpoints:
  - 2.1. the point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — being the sole point located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;
  - 2.2. the point O belonging to this straight line  $a_2$  and being located in the center of this circle of the radius r;

is equal to  $Z_{a_2}$ 

- 3. the segment of the straight line  $e_1$  of the following endpoints:
  - 3.1. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one

of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

3.2. the point O belonging to this straight line  $e_1$  and being located in the center of this circle of the radius r;

is equal to  $Z_{e_1}$ 

- 4. the segment of the straight line  $e_2$  of the following endpoints:
  - 4.1. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints,

belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

4.2. the point O belonging to this straight line  $e_2$  and being located in the center of this circle of the radius r;

is equal to  $Z_{e_2}$ 

- 5. the segment of the straight line  $a_1$  of the following endpoints:
  - 5.1. the point belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less

than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

5.2. the point O belonging to this straight line  $a_1$  and being located in the center of this circle of the radius r;

is equal to  $B_{a_1}$ 

- 6. the segment of the straight line  $a_2$  of the following endpoints:
  - 6.1. the point belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all

of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

6.2. the point O belonging to this straight line  $a_2$  and being located in the center of this circle of the radius r;

is equal to  $B_{a_2}$ 

- 7. the segment of the straight line  $e_1$  of the following endpoints:
  - 7.1. the point belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among

all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

7.2. the point O belonging to this straight line  $e_1$  and being located in the center of this circle of the radius r;

is equal to  $B_{e_1}$ 

- 8. the segments of the straight line  $a_2$  of the following endpoints:
  - 8.1. the point belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the

- radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 8.2. the point O belonging to this straight line  $e_1$  and being located in the center of this circle of the radius r;

is equal to  $B_{e_2}$ 

- 9. the segment of the straight line  $a_1$  of the following endpoints:
  - 9.1. the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;
  - 9.2. the point X;

is equal to  $Y_{a_1}$ .

10. the segment of the straight line  $a_2$  of the following endpoints:

10.1. the point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — being the sole point located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;

10.2. the point X;

is equal to  $Y_{a_2}$ 

- 11. the segment of the straight line  $e_1$  of the following endpoints:
  - 11.1. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than

or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

11.2. the point X;

is equal to  $Y_{e_1}$ 

- 12. the segment of the straight line  $e_2$  of the following endpoints:
  - 12.1. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure

of greater then or equal to 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

12.2. the point X;

is equal to  $Y_{e_2}$ 

- 13. the segment of the straight line  $a_1$  of the following endpoints:
  - 13.1. the point belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located

in the point O and the center of this circle located in the point O belong;

13.2. the point X;

is equal to  $A_{a_1}$ 

- 14. the segment of the straight line  $a_2$  of the following endpoints:
  - 14.1. the point belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

# 14.2. the point X;

is equal to  $A_{a_2}$ 

- 15. the segment of the straight line  $e_1$  of the following endpoints:
  - 15.1. the point belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

15.2. the point X;

is equal to  $A_{e_1}$ 

- 16. the segments of the straight line  $a_2$  of the following endpoints:
  - 16.1. the point belonging to the straight line  $e_2$  being coincident

with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

16.2. the point X;

is equal to  $A_{e_2}$ 

The point X belonging to the segment of the straight line a — where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or

equal to 0 degrees and less than or equal to 90 degrees — can be located in two locations classified by the distance between the two endpoints belonging to the circle of the radius r and of the center located in the point O and to the one of the two radiuses r, being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then or equal to 0 degrees and less than or equal to 90 degrees, each, of this segment of the stright line a, which can be:

- 1. equal to zero, characterized by this that:
  - 1.1. the point X belonging to the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees is:

## 1.1.1. coincident with:

- 1.1.1.1. all of the two endpoints of the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees are coincident with:
- 1.1.1.2. all of the two endpoints of the segment of the stright line e where to each of these two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the

measure of equal to 0 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

1.1.1.3. the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs to the point X and to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

1.1.1.4. the point located in the shortest distance from among

all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs to the point X and to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line c — being the sole point located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;

1.1.1.5. the point belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of

the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

1.1.1.6. the point belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the

center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X—located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O— is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

1.1.1.7. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs to the point X and to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line f — being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

- 1.1.1.8. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs to the point X and to each of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line g — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;
- 1.1.1.9. the point belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints,

belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

1.1.1.10. the point belonging to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its

two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X— located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O— is located in the shortest distance from among all of the points belonging to the straight line e being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- 1.1.2. belongs to the circle of the radius r and of the center located in the point O and to the following coincident straight lines:
- 1.1.2.1. the stright line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line  $a_1$  belongs;
- 1.1.2.2. the stright line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths,

coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line abelongs;

- 1.1.2.3. the stright line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 1.1.2.4. the stright line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 1.1.2.5. the stright line  $b_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths,

coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line bbelongs;

- 1.1.2.6. the stright line  $b_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs;
- 1.1.2.7. the stright line  $c_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs;
- 1.1.2.8. the stright line  $c_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths,

coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line cbelongs;

- 1.1.2.9. the stright line  $f_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 1.1.2.10. the stright line  $f_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 1.1.2.11. the stright line  $g_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths,

coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line gbelongs;

- 1.1.2.12. the stright line  $g_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 1.1.2.13. the stright line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 1.1.3. located in the sole position in the shortest distance from among all of the points belonging to the following coincident straight lines:
- 1.1.3.1. the stright line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of

equal to 0 degrees;

- 1.1.3.2. the stright line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of equal to 0 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to a straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which a point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 1.1.3.3. the stright line b where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$ and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of equal to 0 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the

- measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;
- 1.1.3.4. the stright line c where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$ and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of equal to 0 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;
- 1.1.3.5. the stright line g where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of equal to 0 degrees, of the segment of this straight line g to the center of this circle of

the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

1.1.3.6. the stright line f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$ and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of equal to 0 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

## 1.1.4. equal r;

what gives the following 8 distances equal accordingly:

what gives the following 8 distances equal accordingly: 
$$I\sqrt{(B_{a_1}^2-A_{a_1}^2-Y_{a_1}^2)+Y_{a_1}^2} = \sqrt{Z_{a_1}^2+Y_{a_1}^2} = \sqrt{(r^2-0-0)+0} = \sqrt{r^2}$$
 
$$III\sqrt{(B_{a_2}^2-A_{a_2}^2-Y_{a_2}^2)+Y_{a_2}^2} = \sqrt{Z_{a_2}^2+Y_{a_2}^2} = \sqrt{(r^2-0-0)+0} = \sqrt{r^2}$$
 
$$III\sqrt{(B_{e_1}^2-A_{e_1}^2-Y_{e_1}^2)+Y_{e_1}^2} = \sqrt{Z_{e_1}^2+Y_{e_1}^2} = \sqrt{(r^2-0-0)+0} = \sqrt{r^2}$$
 
$$IV\sqrt{(B_{e_2}^2-A_{e_2}^2-Y_{e_2}^2)+Y_{e_2}^2} = \sqrt{Z_{e_2}^2+Y_{e_2}^2} = \sqrt{(r^2-0-0)+0} = \sqrt{r^2}$$
 
$$V\sqrt{(Z_{a_1}^2+Y_{a_1}^2+A_{a_1}^2)-A_{a_1}^2} = \sqrt{B_{a_1}^2-Y_{a_1}^2} = \sqrt{(r^2+0+0)-0} = \sqrt{r^2}$$
 
$$VI\sqrt{(Z_{e_1}^2+Y_{e_1}^2+A_{e_1}^2)-A_{e_1}^2} = \sqrt{B_{e_1}^2-Y_{e_1}^2} = \sqrt{(r^2+0+0)-0} = \sqrt{r^2}$$
 
$$VIII\sqrt{(Z_{e_1}^2+Y_{e_1}^2+A_{e_1}^2)-A_{e_1}^2} = \sqrt{B_{e_1}^2-Y_{e_1}^2} = \sqrt{(r^2+0+0)-0} = \sqrt{r^2}$$
 
$$VIII\sqrt{(Z_{e_2}^2+Y_{e_2}^2+A_{e_2}^2)-A_{e_2}^2} = \sqrt{B_{e_2}^2-Y_{e_2}^2} = \sqrt{(r^2+0+0)-0} = \sqrt{r^2}$$
 
$$VIII\sqrt{(Z_{e_2}^2+Y_{e_2}^2+A_{e_2}^2)-A_{e_2}^2} = \sqrt{B_{e_2}^2-Y_{e_2}^2} = \sqrt{(r^2+0+0)-0} = \sqrt{r^2}$$

- 2. greater then 0 where the point X can be located in location classified by the position of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line a, each with respect to the point X, which can be:
  - 2.1. symmetrical, characterised by this that:
  - 2.1.1. each of the two endpoints of the segment of the straight line a — where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being,

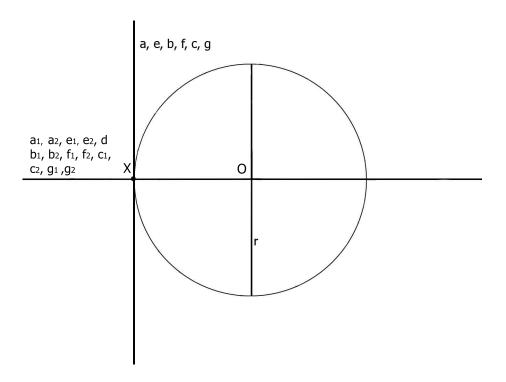


Figure 2: The location of the point X with respect to which the two endpoints, belonging to the circle of the radius r and of the center located in the point O, of the segment of the straight line a are located in an asymmetrical position

on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees — is coincident with:

2.1.1.1. each of the two endpoints of the segment of the stright line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this

straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, each;

2.1.2. the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O, is coincident with:

- 2.1.2.1. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;
- 2.1.3. the point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this

circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — being the sole point located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O, is coincindent with:

2.1.3.1. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with

straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

2.1.4. the point belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident

with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, is coincident with:

2.1.4.1. the point belonging to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius

- r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.1.5. the point belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, is coincident with:
- 2.1.5.1. the point belonging to the straight line  $e_2$  being

coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.1.6. the stright line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths,

coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs, is coincident with:

- 2.1.6.1. the stright line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 2.1.7. the stright line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs, is coincident with:
- 2.1.7.1. the stright line  $e_2$  being coincident with one of the

two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;

- 2.1.8. the stright line b<sub>1</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs, is coincident with:
- 2.1.8.1. the stright line  $f_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the

- center located in the point O, of the segment of the straight line f belongs;
- 2.1.9. the stright line b<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines b<sub>1</sub> and b<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs, is coincident with:
- 2.1.9.1. the stright line  $f_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.1.10. the stright line  $c_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of

greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs, is coincident with:

- 2.1.10.1. the stright line  $g_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 2.1.11. the stright line  $c_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line  $c_1$  belongs, is coincident with:
- 2.1.11.1. the stright line  $g_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on

their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;

- 2.1.12. the stright line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, is coincident with:
- 2.1.12.1. the stright line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to a straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which a point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong:

- 2.1.13. the stright lines b where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$ and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs, is coincident with:
- 2.1.13.1. the stright lines c where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines c<sub>1</sub> and c<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c to the center of this circle of the radius r, located in the point O is located in a shortest distance form among all of the point belonging to the straight line a<sub>2</sub>, being

coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

2.1.14. the stright lines g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs, is coincident with:

2.1.14.1. the stright lines f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

what gives the following 8 distances equal accordingly:

$$\begin{split} & \text{I} \ \sqrt{(B_{a_1}^2 - A_{a_1}^2 - Y_{a_1}^2) + Y_{a_1}^2} = \sqrt{Z_{a_1}^2 + Y_{a_1}^2} = \sqrt{(r^2 - A_{a_1}^2 - Y_{a_1}^2) + Y_{a_1}^2} \\ & \text{II} \ \sqrt{(B_{a_2}^2 - A_{a_2}^2 - Y_{a_2}^2) + Y_{a_2}^2} = \sqrt{Z_{a_2}^2 + Y_{a_2}^2} = \sqrt{(r^2 - A_{a_2}^2 - Y_{a_2}^2) + Y_{a_2}^2} \\ & \text{III} \ \sqrt{(B_{e_1}^2 - A_{e_1}^2 - Y_{e_1}^2) + Y_{e_1}^2} = \sqrt{Z_{e_1}^2 + Y_{e_1}^2} = \sqrt{(r^2 - A_{e_1}^2 - Y_{e_1}^2) + Y_{e_1}^2} \\ & \text{IV} \ \sqrt{(B_{e_2}^2 - A_{e_2}^2 - Y_{e_2}^2) + Y_{e_2}^2} = \sqrt{Z_{e_2}^2 + Y_{e_2}^2} = \sqrt{(r^2 - A_{e_2}^2 - Y_{e_2}^2) + Y_{e_2}^2} \\ & \text{V} \ \sqrt{(Z_{a_1}^2 + Y_{a_1}^2 + A_{a_1}^2) - A_{a_1}^2} = \sqrt{B_{a_1}^2 - A_{a_1}^2} = \sqrt{r^2 - A_{a_1}^2} \\ & \text{VI} \ \sqrt{(Z_{e_1}^2 + Y_{e_1}^2 + A_{e_1}^2) - A_{e_1}^2} = \sqrt{B_{e_1}^2 - A_{e_1}^2} = \sqrt{r^2 - A_{e_1}^2} \\ & \text{VIII} \ \sqrt{(Z_{e_2}^2 + Y_{e_2}^2 + A_{e_2}^2) - A_{e_2}^2} = \sqrt{B_{e_2}^2 - A_{e_2}^2} = \sqrt{r^2 - A_{e_2}^2} \\ & \text{VIIII} \ \sqrt{(Z_{e_2}^2 + Y_{e_2}^2 + A_{e_2}^2) - A_{e_2}^2} = \sqrt{B_{e_2}^2 - A_{e_2}^2} = \sqrt{r^2 - A_{e_2}^2} \end{aligned}$$

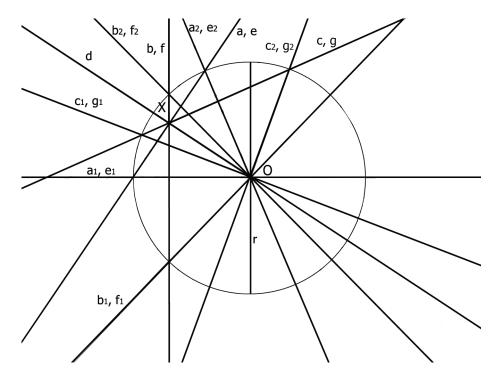


Figure 3: The location of the point X with respect to which the two endpoints, belonging to the circle of the radius r and of the center located in the point O, of the segment of the straight line a are located in an... asymmetrical position

- 2.2. asymmetrical, where the point X can be located in:
  - 2.2.1. one of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 90 degrees, of a segment of this straight line a, each with respect to the point X which can be: characterized by this that:
  - 2.2.1.1. the point X belonging to the segment of the straight line a — where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r

being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees — is coincident with:

- 2.2.1.1.1. one of the two endpoints of the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees;
- 2.2.1.1.2. all of the two endpoints of the segment of the stright line e where to each of these two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.1.1.3. the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the

circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

2.2.1.1.4. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight

line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line f — being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r;

2.2.1.1.5. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line q — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

2.2.1.1.6. the point belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

- 2.2.1.1.7. the point belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.1.1.8. the point belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in

the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.1.2. the stright line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90

- degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs; is coincident with:
- 2.2.1.2.1. the stright lines  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 2.2.1.2.2. the stright lines  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 2.2.1.2.3. the stright lines  $b_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of

- the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs;
- 2.2.1.2.4. the stright lines  $b_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs;
- 2.2.1.2.5. the stright lines  $f_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.2.1.2.6. the stright lines  $f_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of

- the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.2.1.2.7. the stright lines  $g_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 2.2.1.2.8. the stright lines  $c_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs;
- 2.2.1.2.9. the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O

belong,

- 2.2.1.3. the stright lines  $c_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs; is coincident with:
- 2.2.1.3.1. the stright lines  $g_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 2.2.1.4. the stright lines e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of equal to 0 degrees, of the segment of this straight line e the point X is the sole point located

in the shortest distance from among all of the points belonging to a straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which a point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong, is coincident with:

- 2.2.1.4.1. the stright lines b where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;
- 2.2.1.4.2. the stright lines f where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident

with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

2.2.1.5. the stright lines c — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and

with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs; is coincident with:

2.2.1.5.1. the stright lines g — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

what gives the following 8 distances equal accordingly:

$$\begin{split} & \text{I} \sqrt{(B_{a_1}^2 - A_{a_1}^2 - Y_{a_1}^2) + Y_{a_1}^2} = & \sqrt{Z_{a_1}^2 + Y_{a_1}^2} = & \sqrt{(r^2 - 0 - 0) + 0} = \\ & \sqrt{r^2} \\ & \text{II} \sqrt{(B_{a_2}^2 - A_{a_2}^2 - Y_{a_2}^2) + Y_{a_2}^2} = & \sqrt{r_2 - Y_{a_2}^2) + Y_{a_2}^2} = & \sqrt{r^2} \end{split}$$

$$\begin{split} & \text{III} \sqrt{(B_{e_1}^2 - A_{e_1}^2 - Y_{e_1}^2) + Y_{e_1}^2} = \sqrt{Z_{e_1}^2 + Y_{e_1}^2} = \sqrt{r^2 - 0 - 0) + 0} = \\ & \text{IV} \sqrt{(B_{e_2}^2 - A_{e_2}^2 - Y_{e_2}^2) + Y_{e_2}^2} = \sqrt{Z_{e_2}^2 + Y_{e_2}^2} = \sqrt{r^2 - 0 - 0) + 0} = \\ & \text{V} \sqrt{(Z_{a_1}^2 + Y_{a_1}^2 + A_{a_1}^2) - A_{a_1}^2} = \sqrt{B_{a_1}^2 - A_{a_1}^2} = \sqrt{(r^2 + 0 + 0) - 0} = \\ & \text{VI} \sqrt{(Z_{a_2}^2 + Y_{a_2}^2 + A_{a_2}^2) - A_{a_2}^2} = \sqrt{B_{a_2}^2 - A_{a_2}^2} = \sqrt{r^2} \\ & \text{VII} \sqrt{(Z_{e_1}^2 + Y_{e_1}^2 + A_{e_1}^2) - A_{e_1}^2} = \sqrt{B_{e_1}^2 - A_{e_1}^2} = \sqrt{(r^2 + 0 + 0) - 0} = \\ & \sqrt{r^2} \\ \end{aligned}$$

- 2.2.2. the other one of the two endpoints belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 90 degrees, of a segment of this straight line a, each with respect to the point X which can be: characterized by this that:
- 2.2.2.1. the point X belonging to the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees is coincident with:
- 2.2.2.1.1. one of the two endpoints of the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r

being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees;

- 2.2.2.1.2. all of the two endpoints of the segment of the stright line e where to each of these two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.2.1.3. the point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the

point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — being the sole point located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;

2.2.2.1.4. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to

180 degrees, of the segment of this straight line f— being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r;

- 2.2.2.1.5. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line q— being the sole point located in the shortest distance from among all of the points belonging to the straight line q to the center of this circle of the radius r, located in the point O;
- 2.2.2.1.6. the point belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the

two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.2.1.7. the point belonging to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central

angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.2.1.8. the point belonging to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the

point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.2.2. the stright line a<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs; is coincident with:

2.2.2.2.1. the stright lines  $e_1$  being coincident with one of the

two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;

- 2.2.2.2.2. the stright lines  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 2.2.2.3. the stright lines  $b_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs;

- 2.2.2.2.4. the stright lines  $f_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.2.2.5. the stright lines  $g_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 2.2.2.2.6. the stright lines  $c_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one

- of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs;
- 2.2.2.7. the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong,
- 2.2.2.3. the stright lines  $c_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line  $c_1$  belongs; is coincident with:
- 2.2.2.2.1. the stright lines  $b_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs;

- 2.2.2.2.2 the stright lines  $f_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.2.2.3. the stright lines  $g_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 2.2.2.4. the stright lines b where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b to the center of this circle of

the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs; is coincident with:

2.2.2.4.1. the stright lines f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center

- located in the point O, of the segment of the straight line e, belongs;
- 2.2.2.4.2. the stright lines c where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;
- 2.2.2.4.3. the stright lines g where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180

degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of equal to 0 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

what gives the following 8 distances equal accordingly:

$$\begin{split} &\operatorname{I}\sqrt{(B_{a_1}^2-A_{a_1}^2-Y_{a_1}^2)+Y_{a_1}^2} = \sqrt{r_2-Y_{a_1}^2)+Y_{a_1}^2} = \sqrt{r^2} \\ &\operatorname{II}\sqrt{(B_{a_2}^2-A_{a_2}^2-Y_{a_2}^2)+Y_{a_2}^2} = \sqrt{Z_{a_2}^2+Y_{a_2}^2} = \sqrt{(r^2-0-0)+0} = \\ &\sqrt{r^2} \\ &\operatorname{III}\sqrt{(B_{e_1}^2-A_{e_1}^2-Y_{e_1}^2)+Y_{e_1}^2} = \sqrt{Z_{e_1}^2+Y_{e_1}^2} = \sqrt{r^2-0-0} + 0 = \\ &\sqrt{r^2} \\ &\operatorname{IV}\sqrt{(B_{e_2}^2-A_{e_2}^2-Y_{e_2}^2)+Y_{e_2}^2} = \sqrt{Z_{e_2}^2+Y_{e_2}^2} = \sqrt{r^2-0-0} + 0 = \\ &\sqrt{r^2} \\ &\operatorname{V}\sqrt{(Z_{a_1}^2+Y_{a_1}^2+A_{a_1}^2)-A_{a_1}^2} = \sqrt{B_{a_1}^2-A_{a_1}^2} = \sqrt{r^2} \\ &\operatorname{VI}\sqrt{(Z_{a_2}^2+Y_{a_2}^2+A_{a_2}^2)-A_{a_2}^2} = \sqrt{B_{a_2}^2-A_{a_2}^2} = \sqrt{(r^2+0+0)-0} = \\ &\sqrt{r^2} \\ &\operatorname{VII}\sqrt{(Z_{e_1}^2+Y_{e_1}^2+A_{e_1}^2)-A_{e_1}^2} = \sqrt{B_{e_1}^2-A_{e_1}^2} = \sqrt{(r^2+0+0)-0} = \\ &\sqrt{r^2} \\ &\operatorname{VIII}\sqrt{(Z_{e_2}^2+Y_{e_2}^2+Z_{e_2}^2)-A_{e_2}^2} = \sqrt{B_{e_2}^2-A_{e_2}^2} = \sqrt{(r^2+0+0)-0} = \\ &\sqrt{r^2} \\ \end{split}$$

2.2.3. on the segment of the straight line a — where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one

of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees except its endpoints characterised by this that:

- 2.2.3.1. the following stright lines are not coincident:
- 2.2.3.1.1. the stright line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs;
- 2.2.3.1.2. the stright line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a belongs;
- 2.2.3.1.3. the stright line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the

point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;

- 2.2.3.1.4. the stright line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e belongs;
- 2.2.3.1.5. the stright line  $b_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the

straight line b belongs;

- 2.2.3.1.6. the stright line  $b_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line b belongs;
- 2.2.3.1.7. the stright line  $c_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs;
- 2.2.3.1.8. the stright line  $c_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less

- than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line c belongs;
- 2.2.3.1.9. the stright line  $f_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.2.3.1.10. the stright line  $f_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line f belongs;
- 2.2.3.1.11. the stright line  $g_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and

 $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;

- 2.2.3.1.12. the stright line  $g_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line g belongs;
- 2.2.3.1.13. the stright line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;
- 2.2.3.1.14. the stright line a where each of the two endpoints, belonging to the circle of the radius r and of the center located in a point O, of the segment of which, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than

or equal to 90 degrees,

- 2.2.3.1.15. the stright line e where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of a central angle of a vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to a straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which a point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong,
- 2.2.3.1.16. the stright line b where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with

straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;

- 2.2.3.1.17. the stright line c where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $a_2$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs;
- 2.2.3.1.18. the stright line g where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of

its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — to the center of this circle of the radius r, located in the point O — is located in a shortest distance form among all of the point belonging to the straight line  $e_1$ , being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

2.2.3.1.19. the stright line f — where to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of a measure of greater then O degrees and less than or equal to O degrees, of the segment of this straight line O to the center of this circle of the radius O to the point O — is located in a shortest distance form among all of the point belonging to the straight line O being coincident with one of the two radiuses O of

the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs;

- 2.2.3.2. the following points are not coincident:
- 2.2.3.2.1. the point X belonging to the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees;
- 2.2.3.2.2. the two endpoints of the segment of the straight line a where each of its two endpoints, belonging to the circle of the radius r and of the center located in the point O, belongs to one of the two radiuses r being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees are coincident with:
- 2.2.3.2.3. the two endpoints of the segment of the stright line *e* where to each of these two endpoints, belonging to the circle of the radius r and of the center located in the

point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e the point X is the sole point located in the shortest distance from among all of the points belonging to the straight line e being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.3.2.4. the point located in the shortest distance from among all of the points belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $b_1$  and  $b_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line b — being the sole point

- located in the shortest distance from among all of the points belonging to the straight line b to the center of this circle of the radius r, located in the point O;
- 2.2.3.2.5. the point located in the shortest distance from among all of the points belonging to the straight line  $a_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $c_1$  and  $c_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line c — being the sole point located in the shortest distance from among all of the points belonging to the straight line c to the center of this circle of the radius r, located in the point O;
- 2.2.3.2.6. the point belonging to the straight line  $a_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $a_1$  and  $a_2$  and with sides of the central angle of the ver-

tex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.3.2.7. the point belonging to the straight line a<sub>2</sub> being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines a<sub>1</sub> and a<sub>2</sub> and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center lo-

cated in the point O, of the segment of the straight line a, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.3.2.8. the point located in the shortest distance from among all of the points belonging to the straight line  $e_1$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and

of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $f_1$  and  $f_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line f—being the sole point located in the shortest distance from among all of the points belonging to the straight line f to the center of this circle of the radius r, located in the point O;

2.2.3.2.9. the point located in the shortest distance from among all of the points belonging to the straight line  $e_2$  being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs — to the point X and to each of the two endpoints — belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $g_1$  and  $g_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line g — being the sole point located in the shortest distance from among all of the points belonging to the straight line g to the center of this circle of the radius r, located in the point O;

2.2.3.2.10. the point belonging to the straight line  $e_1$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line d being coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

2.2.3.2.11. the point belonging to the straight line  $e_2$  — being coincident with one of the two radiuses r of the circle of the center located in the point O being one of the two radiuses r of this circle of the center located in the point

O being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 90 degrees, to each of which one of the two endpoints, belonging to this circle of the center located in the point O, of the segment of the straight line e, belongs and belonging to the straight line e to which as to each of the two endpoints, belonging to the circle of the radius r and of the center located in the point O and to one of its two radiuses r being, on their lengths, coincident with straight lines  $e_1$  and  $e_2$  and with sides of the central angle of the vertex located in the point O being the center of this circle and of the measure of greater then 0 degrees and less than or equal to 180 degrees, of the segment of this straight line e, the point X — located in the shortest distance from among all of the points belonging to the straight line e to the center of this circle of the radius r, located in the point O — is located in the shortest distance from among all of the points belonging to the straight line dbeing coincident with the radius r of this circle of the center located in the point O, on its length, to which the point belonging to this circle of the radius r and of the center located in the point O and the center of this circle located in the point O belong;

what gives the following 8 distances equal accordingly:

$$\begin{split} &\text{I} \sqrt{(B_{a_1}^2 - A_{a_1}^2 - Y_{a_1}^2) + Y_{a_1}^2} \\ &\text{II} \sqrt{(B_{a_2}^2 - A_{a_2}^2 - Y_{a_2}^2) + Y_{a_2}^2} \\ &\text{III} \sqrt{(B_{e_1}^2 - A_{e_1}^2 - Y_{e_1}^2) + Y_{e_1}^2} \\ &\text{IV} \sqrt{(B_{e_2}^2 - A_{e_2}^2 - Y_{e_2}^2) + Y_{e_2}^2} \end{split}$$

$$V\sqrt{(Z_{a_1}^2 + Y_{a_1}^2 + A_{a_1}^2) - A_{a_1}^2}$$

$$VI\sqrt{(Z_{a_2}^2 + Y_{a_2}^2 + A_{a_2}^2) - A_{a_2}^2}$$

$$VII\sqrt{(Z_{e_1}^2 + Y_{e_1}^2 + A_{e_1}^2) - A_{e_1}^2}$$

$$VIII\sqrt{(Z_{e_2}^2 + Y_{e_2}^2 + Z_{e_2}^2) - A_{e_2}^2}$$

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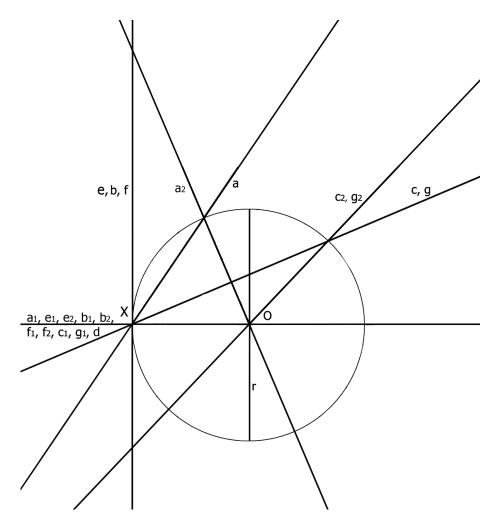


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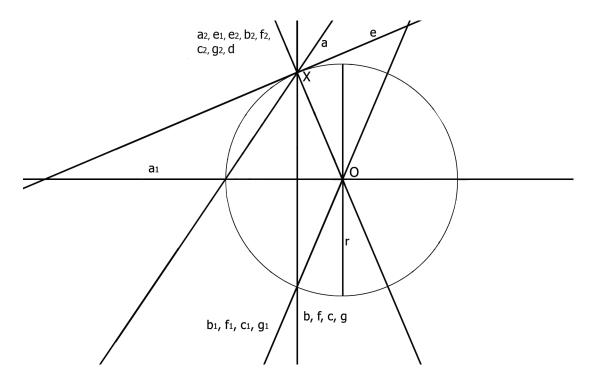


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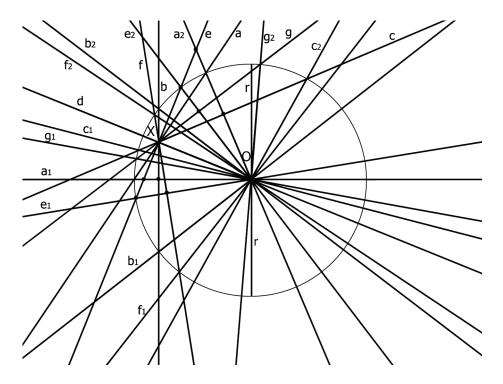


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