

*Решение задач  
на готовых чертежах.*

*Окружность.  
Центральные и  
вписанные углы.*

*Геометрия.  
8 класс.*

*Каратанова Марина Николаевна  
МОУ СОШ №256 г.Фокино*



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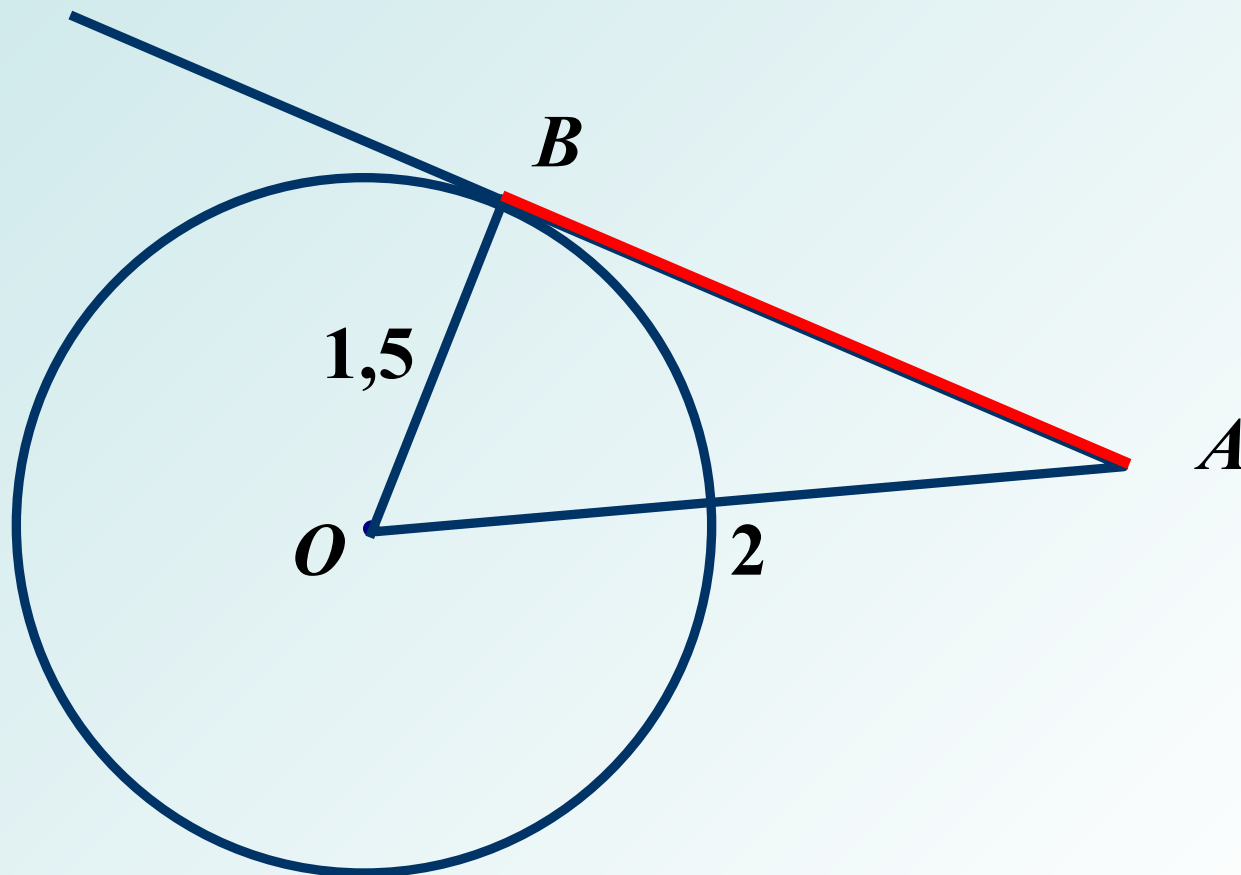
1.

**Дано:**

$\hat{I} \in \hat{O} . (\hat{I} , r), \hat{A} \hat{A} - \text{êàñàòàëüíà ÿ}$   
 $\hat{I} \hat{A} = 2\tilde{n}\hat{i} , r = 1,5\tilde{n}\hat{i}$

**Найти:**

$\hat{A} \hat{A}$



2.

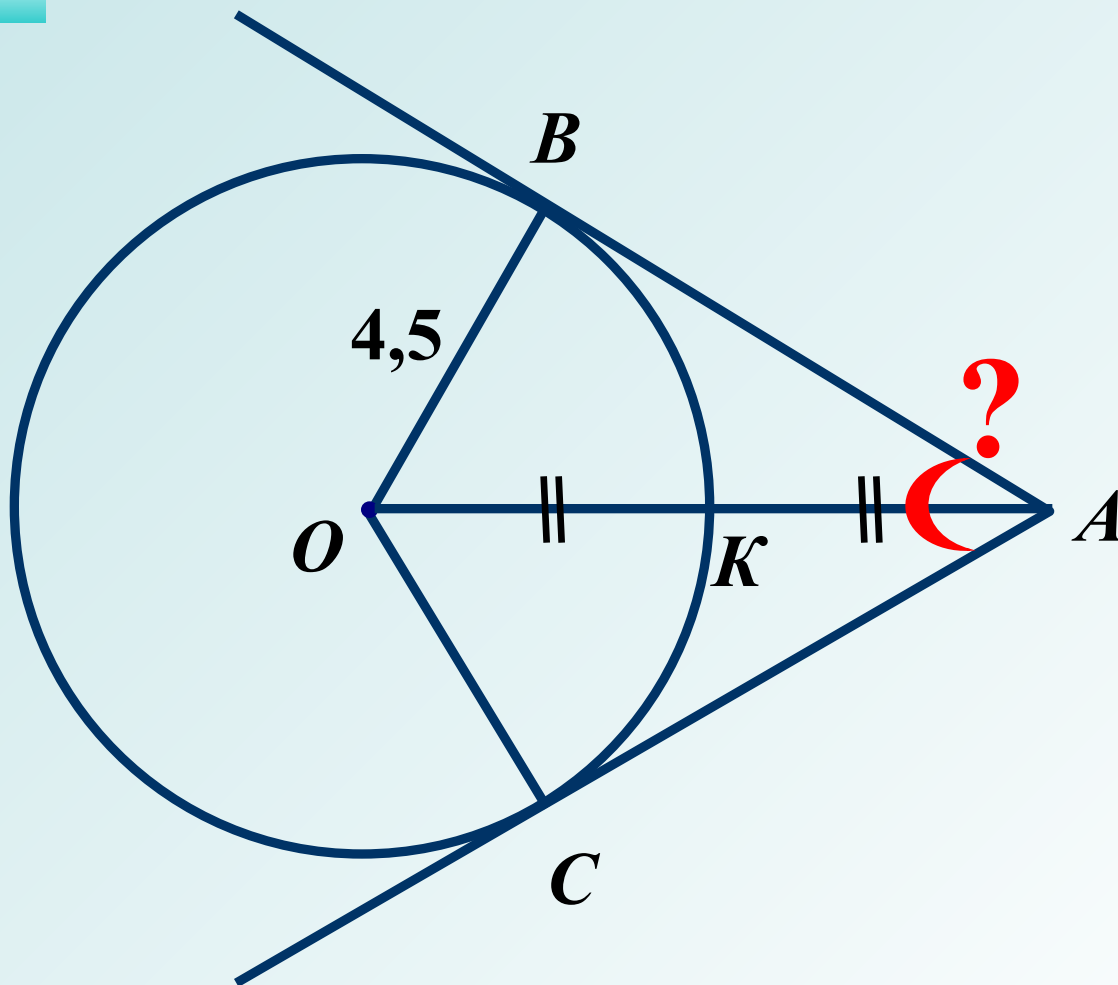
**Дано:**

$\text{дана } (I, r)$

$AA', AN - \text{касательные к}$

**Найти:**

$\angle AAN'$



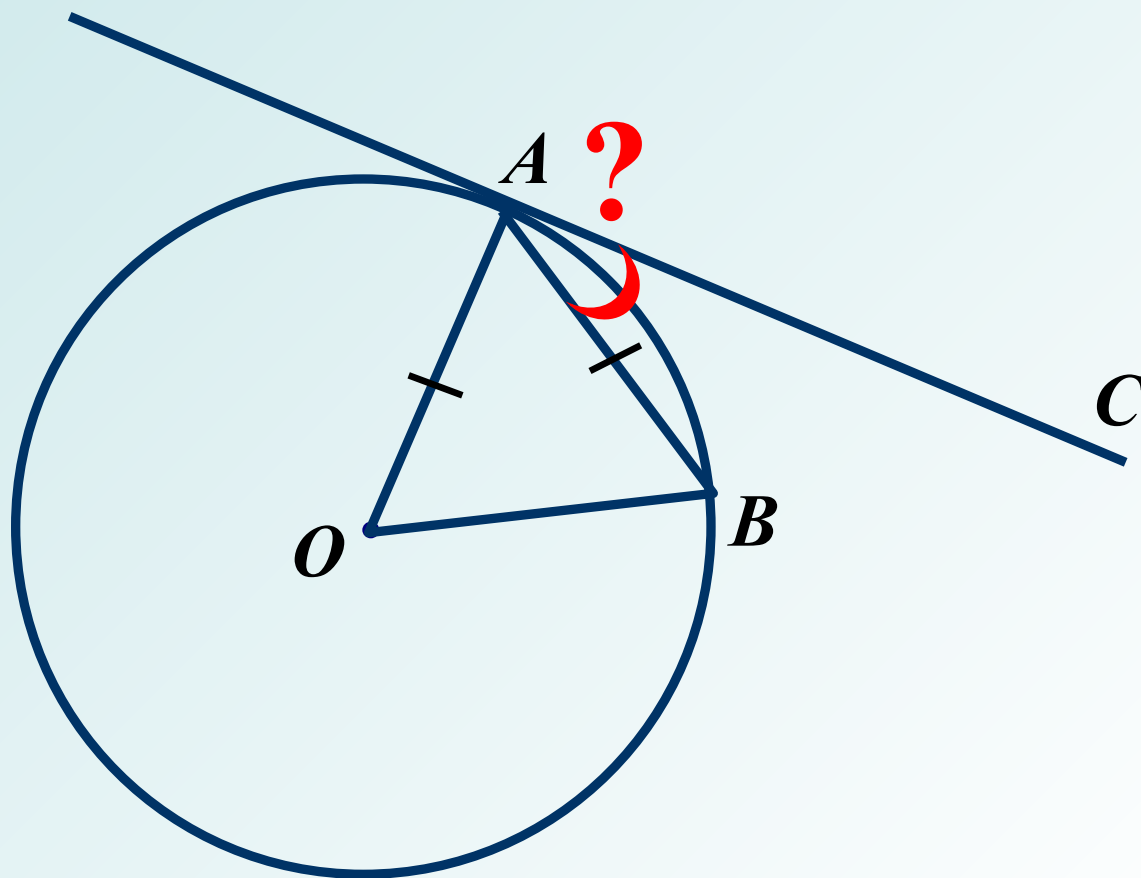
3.

**Дано:**

$\hat{I} \in \hat{O} . (\hat{I} , \hat{I} \hat{A} )$   
 $\hat{A} \hat{N} - \text{тangent to the circle at } A$

**Найти:**

$\angle \hat{A} \hat{A} \hat{N}$



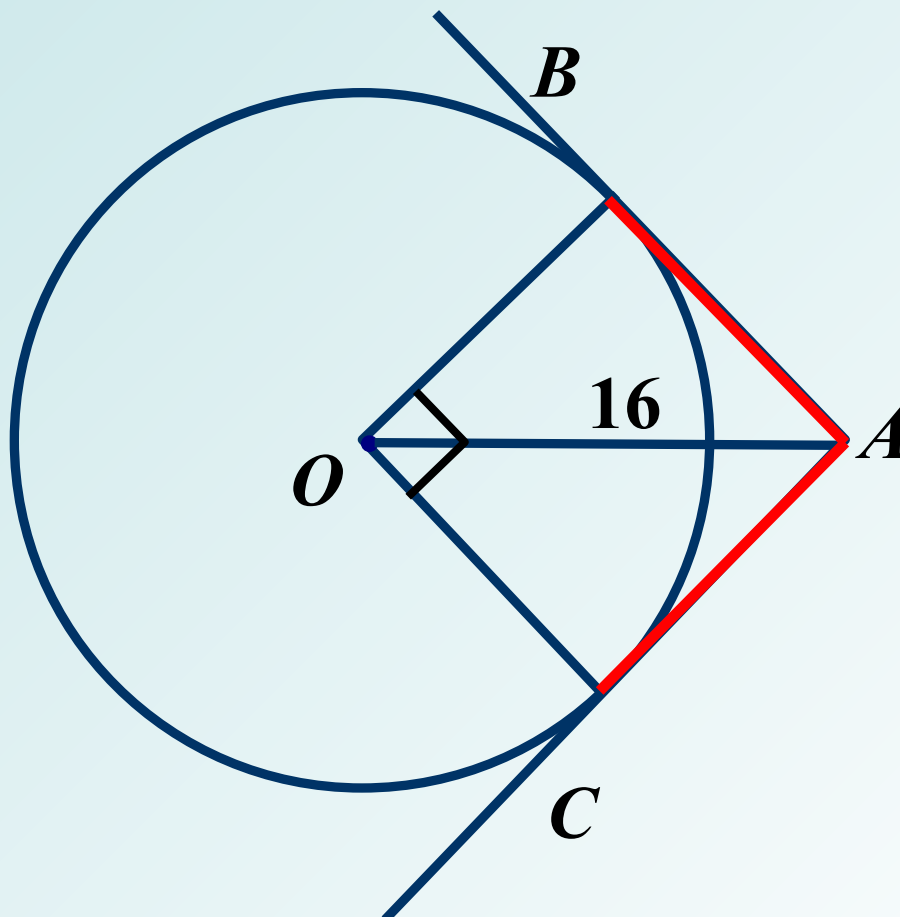
4.

**Дано:**

$\angle BOA = 16^\circ$ ,  $\angle AOB = 16^\circ$ ,  $OA = 16$   
 $AB, AC$  – касательные к окружности в точках  $B$  и  $C$

**Найти:**

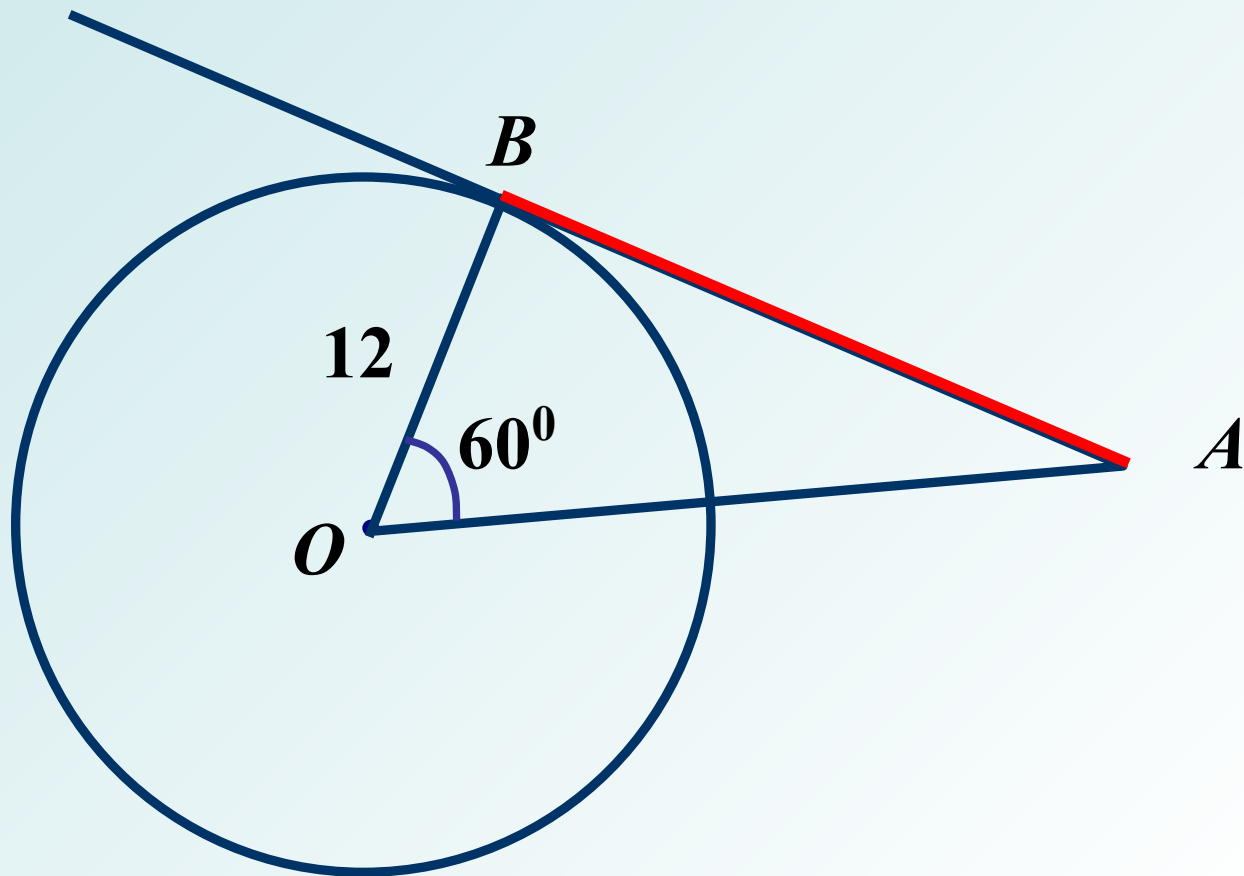
$\angle BAC, \angle AOC$



5.

**Дано:**  $\hat{I} \in \hat{O} . (\hat{I} , \hat{I} \hat{A} ) ,$   
 $\hat{A} \hat{A} - \text{еàñàòåüíà } \ddot{y}$

**Найти:**  $\hat{A} \hat{A}$



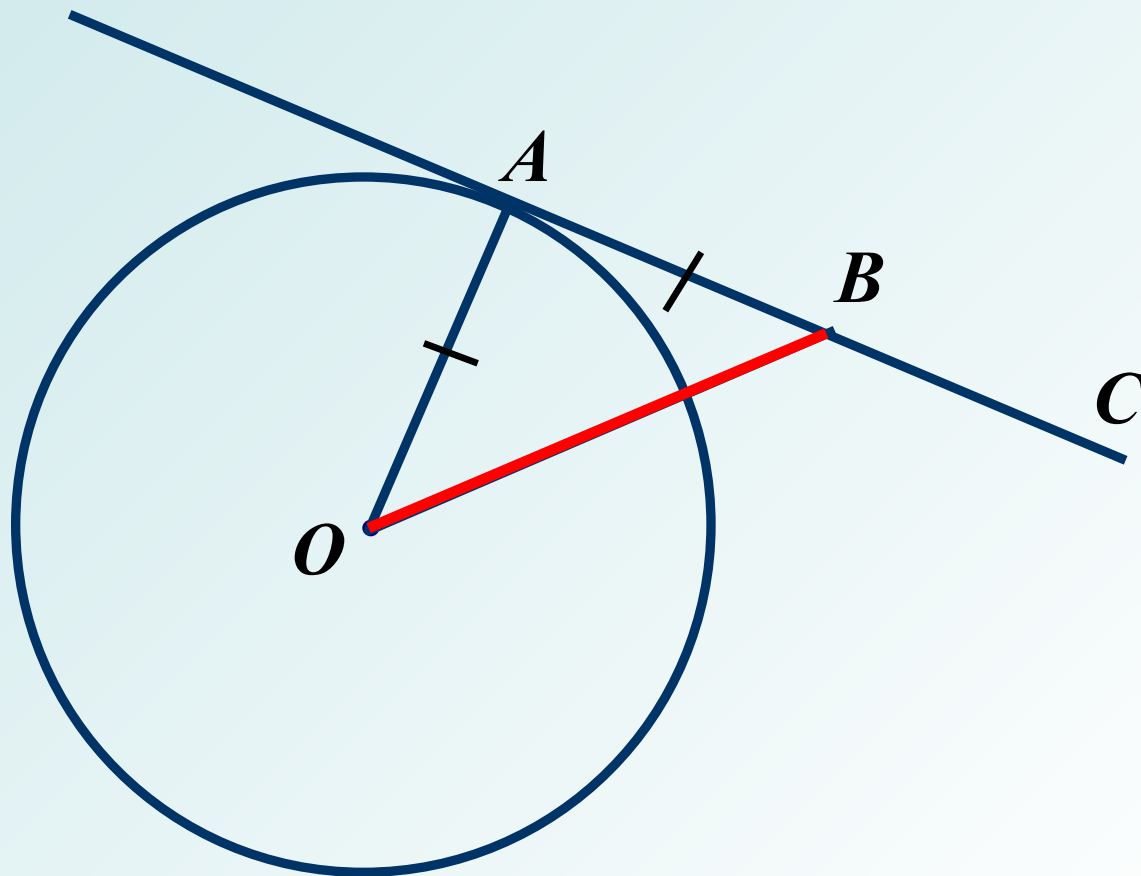
6.

**Дано:**

$\hat{I} \hat{e} \hat{o} .(\hat{I} , R), R = 5$   
 $\hat{A} \hat{A} - \hat{e} \hat{a} \hat{n} \hat{a} \hat{o} \hat{a} \hat{e} \hat{i} \hat{i} \hat{a} \hat{y}$

**Найти:**

$O\hat{A}$



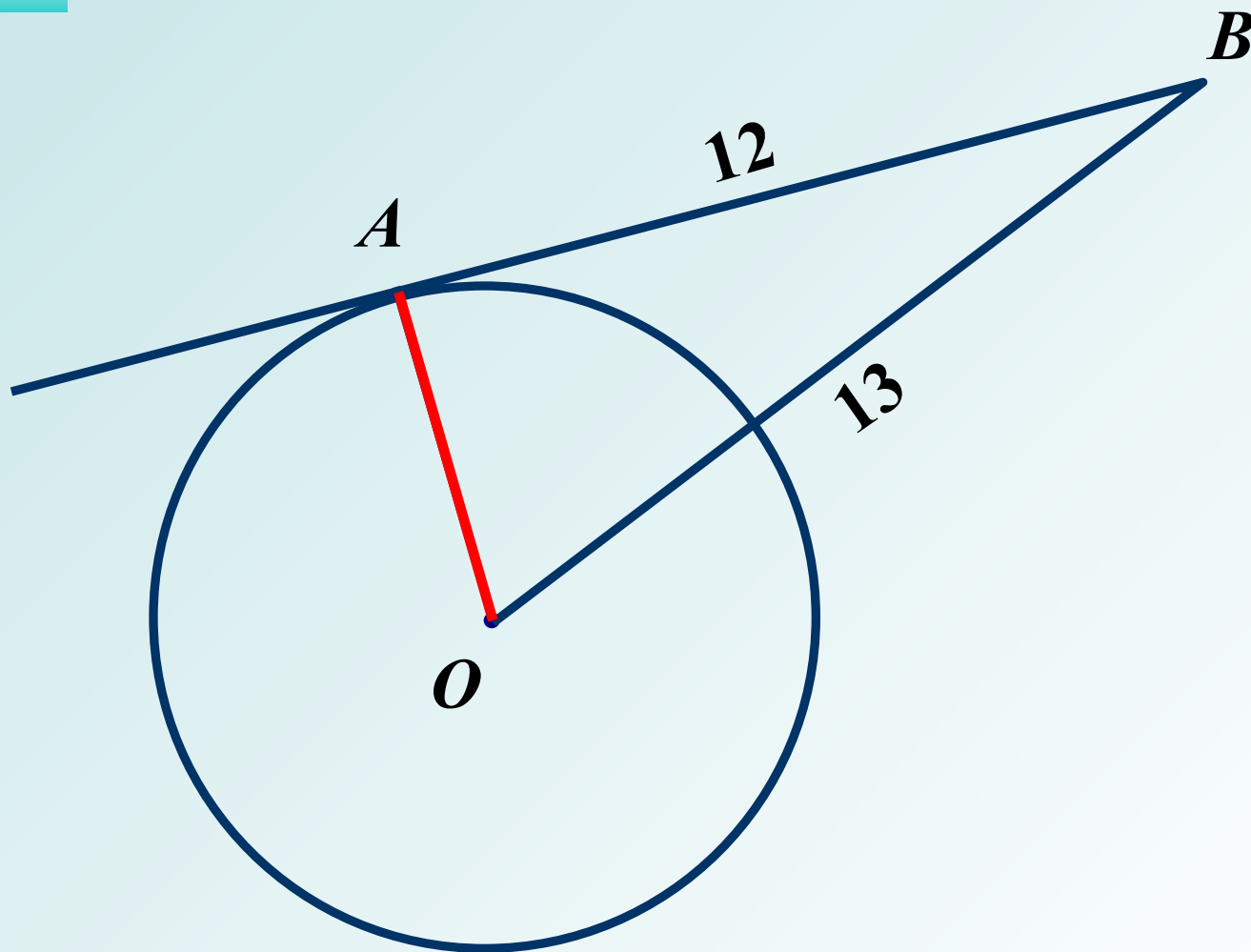
7.

**Дано:**

$\hat{I} \hat{e} \hat{o} . (\hat{I} , R)$   
 $\hat{A} \hat{A} - \hat{e} \hat{a} \hat{n} \hat{a} \hat{o} \hat{a} \hat{e} \hat{i} \hat{i} \hat{a} \hat{y}$

**Найти:**

$R \hat{i} \hat{e} \hat{o} \hat{o} \hat{a} \hat{i} \hat{i} \hat{n} \hat{o} \hat{e}$



8.

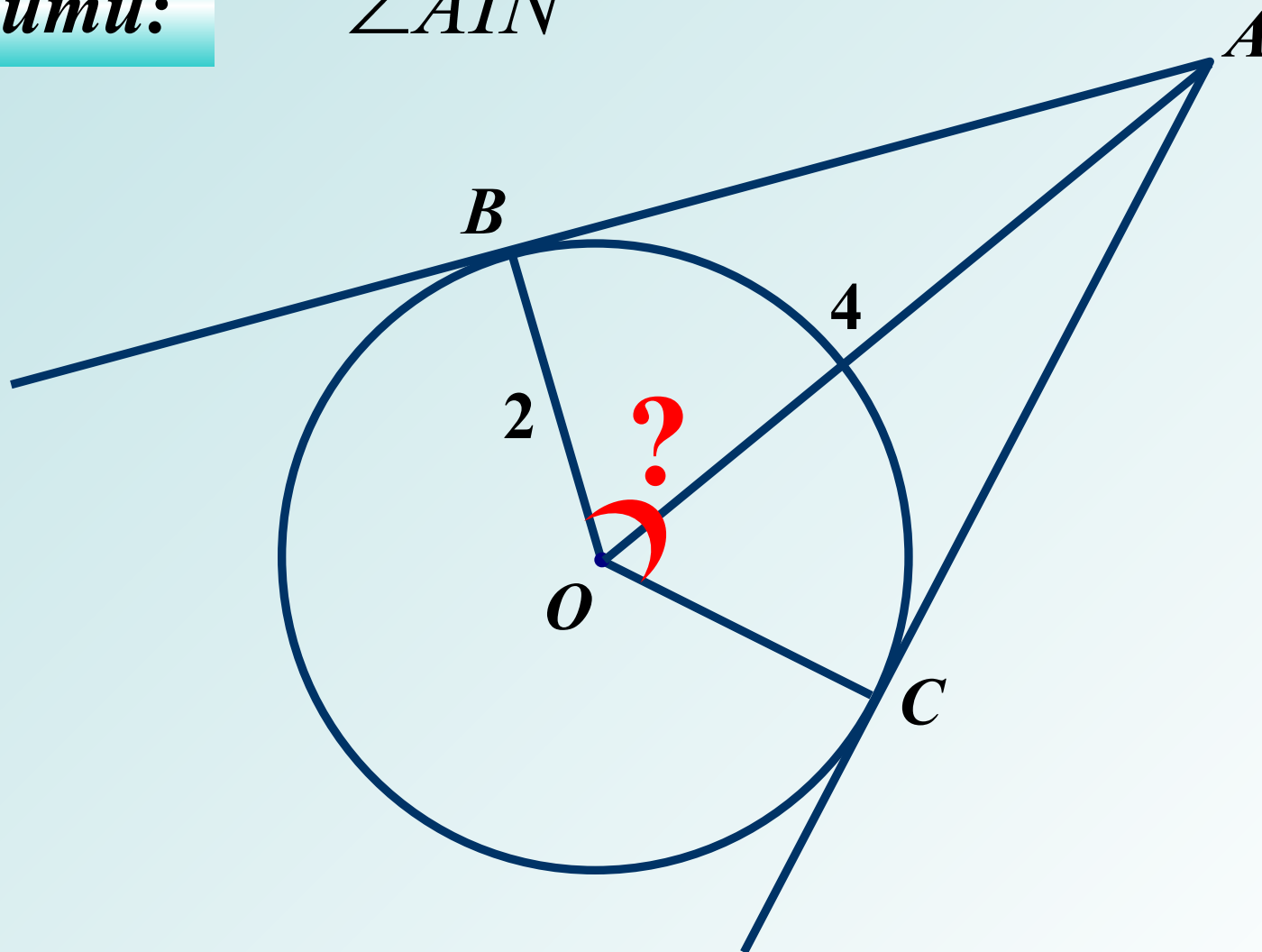
**Дано:**

$\hat{I} \in \delta .(\hat{I} , \hat{I} \hat{A} )$ ,

$\hat{A} \hat{A} , \hat{A} \hat{N} - \text{éàñàòàëüüû à}$

**Найти:**

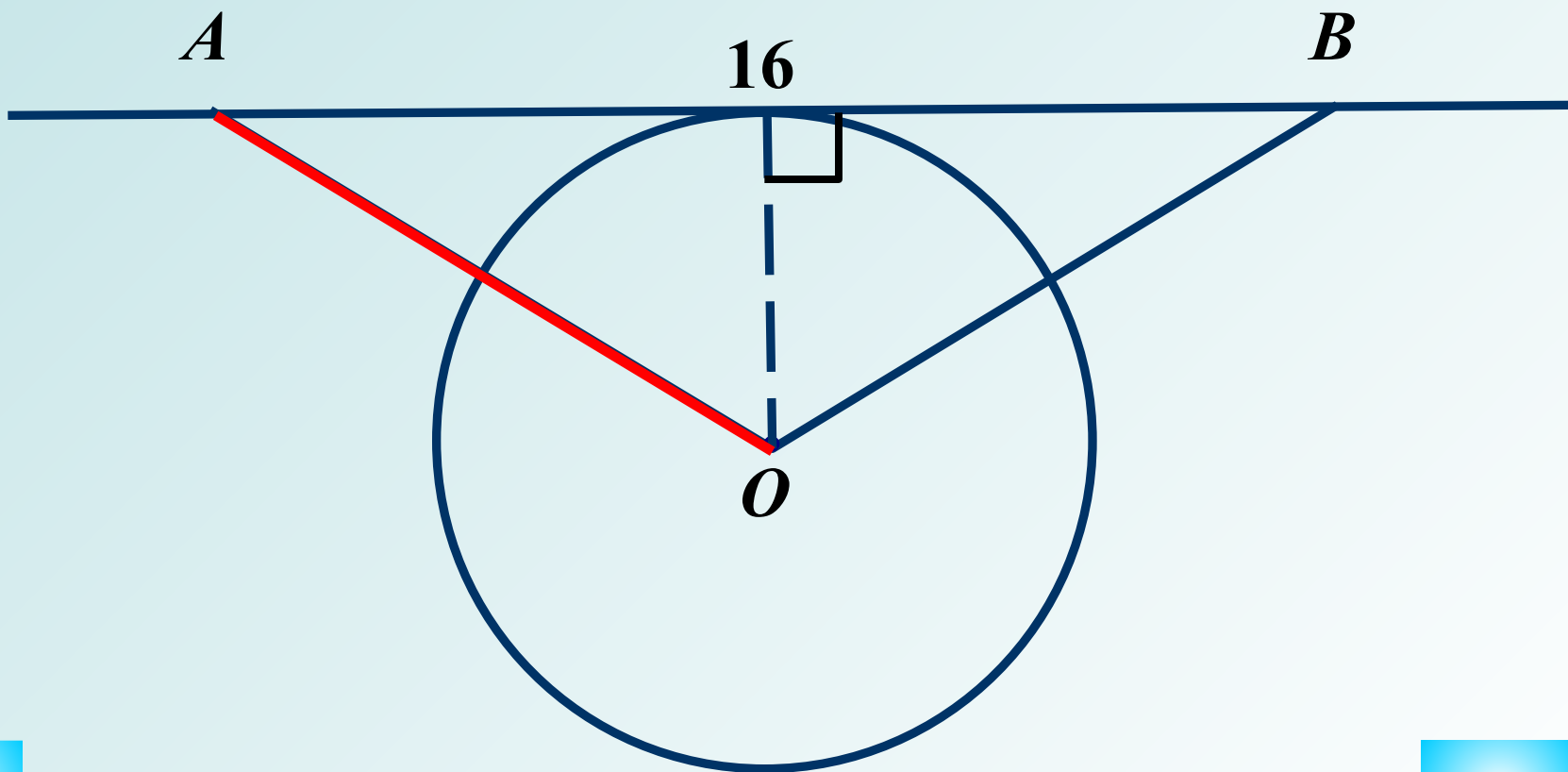
$\angle \hat{A} \hat{I} \hat{N}$



9.

Дано:  $\hat{I} \hat{e} \check{o} .(\hat{I} , R), R = 6$   
 $\hat{A} \hat{A} - \hat{e} \grave{a} \tilde{n} \grave{a} \grave{o} \grave{a} \ddot{e} \ddot{u} \acute{u} \grave{a} \ddot{y}, \hat{I} \hat{A} = \hat{I} \hat{A}$

Найти:  $O\hat{A}$



Доп.

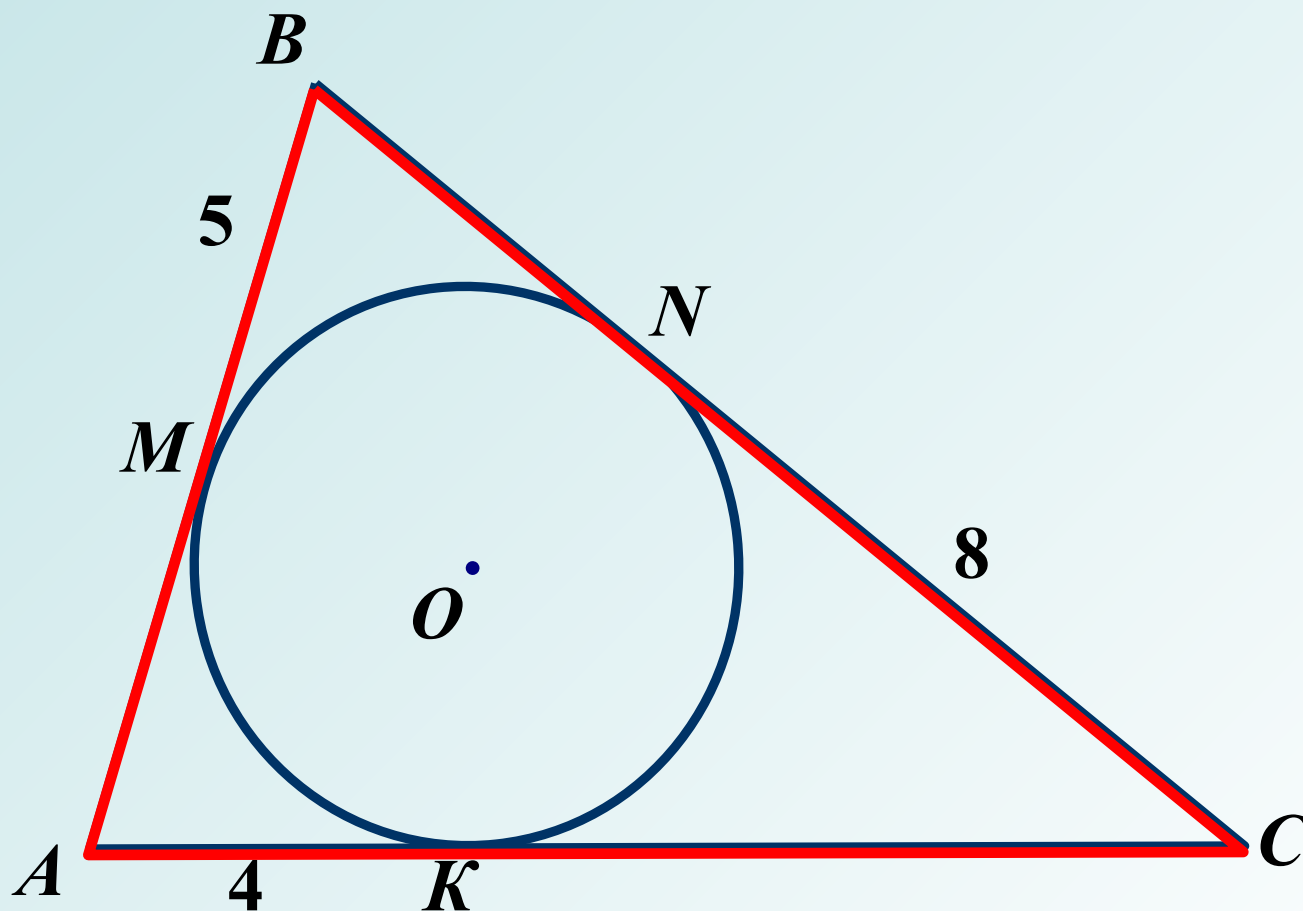
10.

**Дано:**

$I, N, K$  – ої÷ее еаїаіє

**Найти:**

$P_{ABC}$



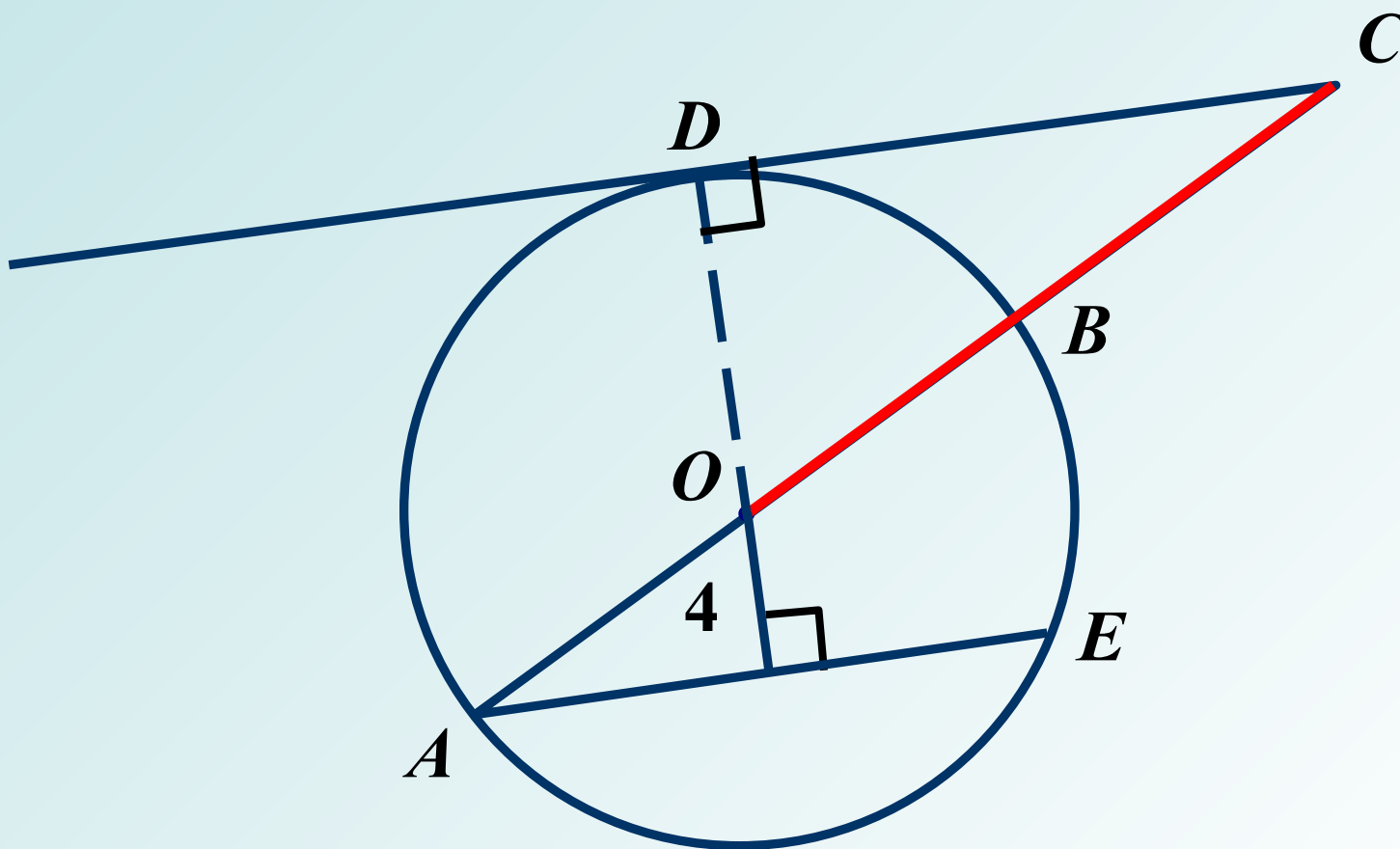
11.

Дано:

$\hat{I} \hat{e} \hat{o} . (\hat{I} , \hat{I} \hat{A} ) , \hat{A} \hat{A} = 10$   
 $CD - \text{eàñàòâëüíà } \ddot{y}, \hat{A}E \parallel CD$

Найти:

$OC$



Доп.

12.

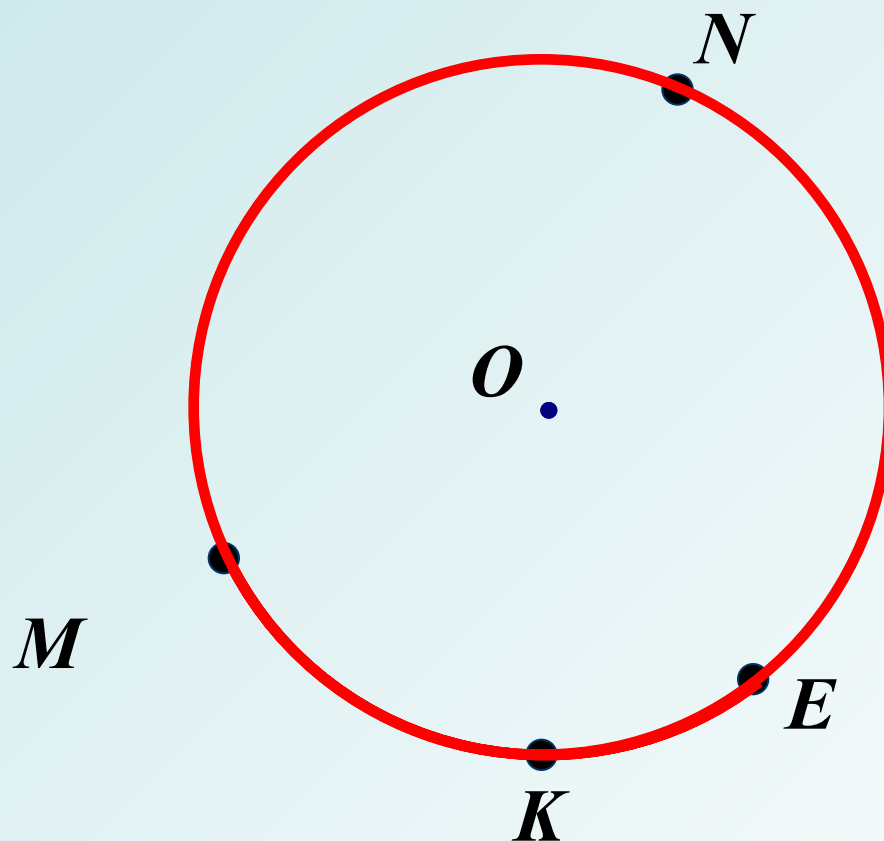
**Дано:**

$\hat{I} \hat{E} \hat{O} . (\hat{I} , R)$

$\cup \hat{I} \hat{E} \hat{A} < \cup MNE \hat{a} 2 \hat{o} \hat{a} \hat{c} \hat{a}$

**Найти:**

$\cup \hat{I} \hat{E} \hat{A} , \cup MNE$



13.

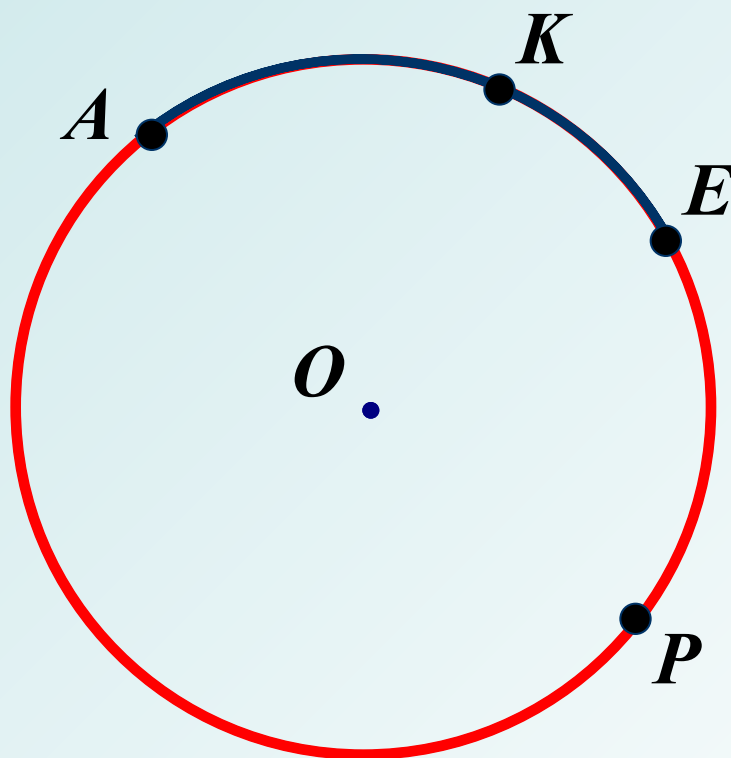
**Дано:**

$\hat{I} \in \hat{O} \cdot (\hat{I}, R)$

$\cup \hat{A} \hat{E} \hat{A} < \cup \hat{A} \hat{D} \hat{E} \text{ à } 140^0$

**Найти:**

$\cup \hat{A} \hat{D} \hat{E}$



14.

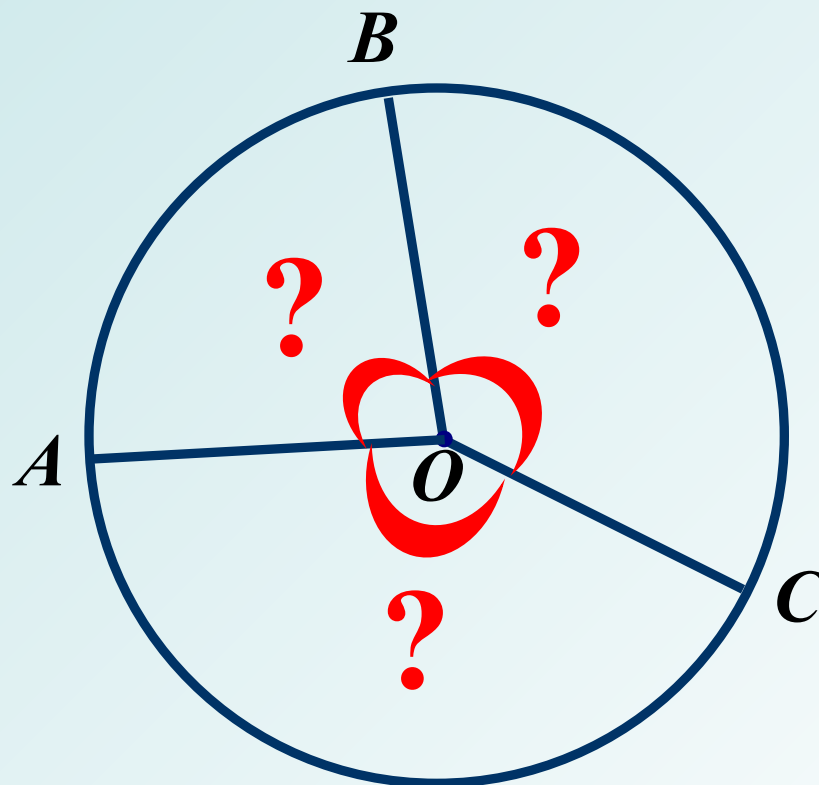
**Дано:**

$\hat{I} \in \partial (I, R)$

$$\cup A\hat{A} : \cup A\hat{I}\tilde{N} : \cup A\hat{N} = 2 : 3 : 4$$

**Найти:**

$$\angle A\hat{I}\hat{A}, \angle A\hat{I}\tilde{N}, \angle A\hat{I}\hat{N}$$

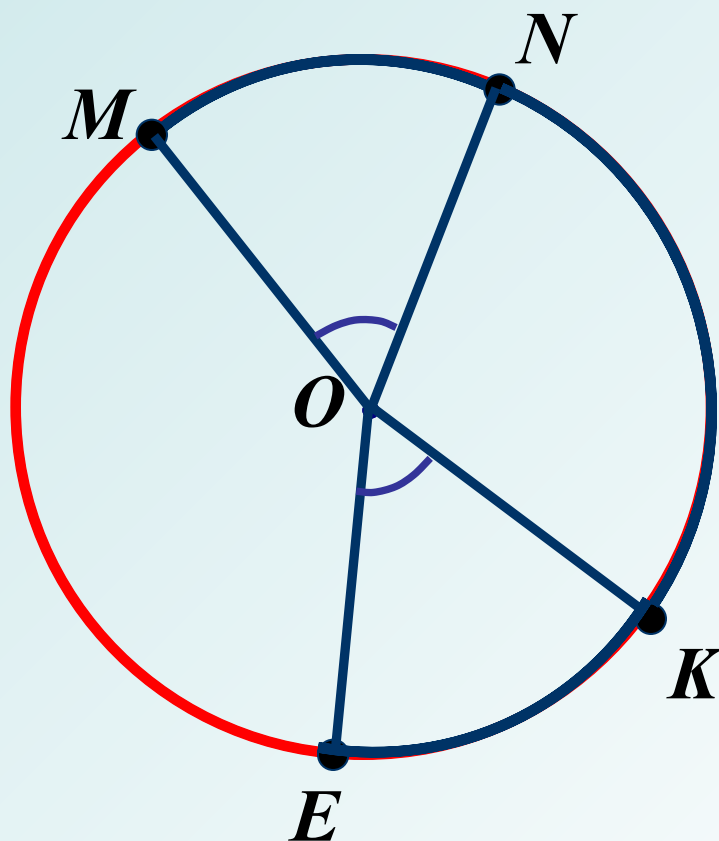


15.

**Дано:**  $\hat{I}e\delta .(\hat{I} , R)$

$$\angle \hat{I}\hat{I}N : \angle \hat{N}\hat{I}K : \angle \hat{M}\hat{I}E = 3 : 4 : 5$$

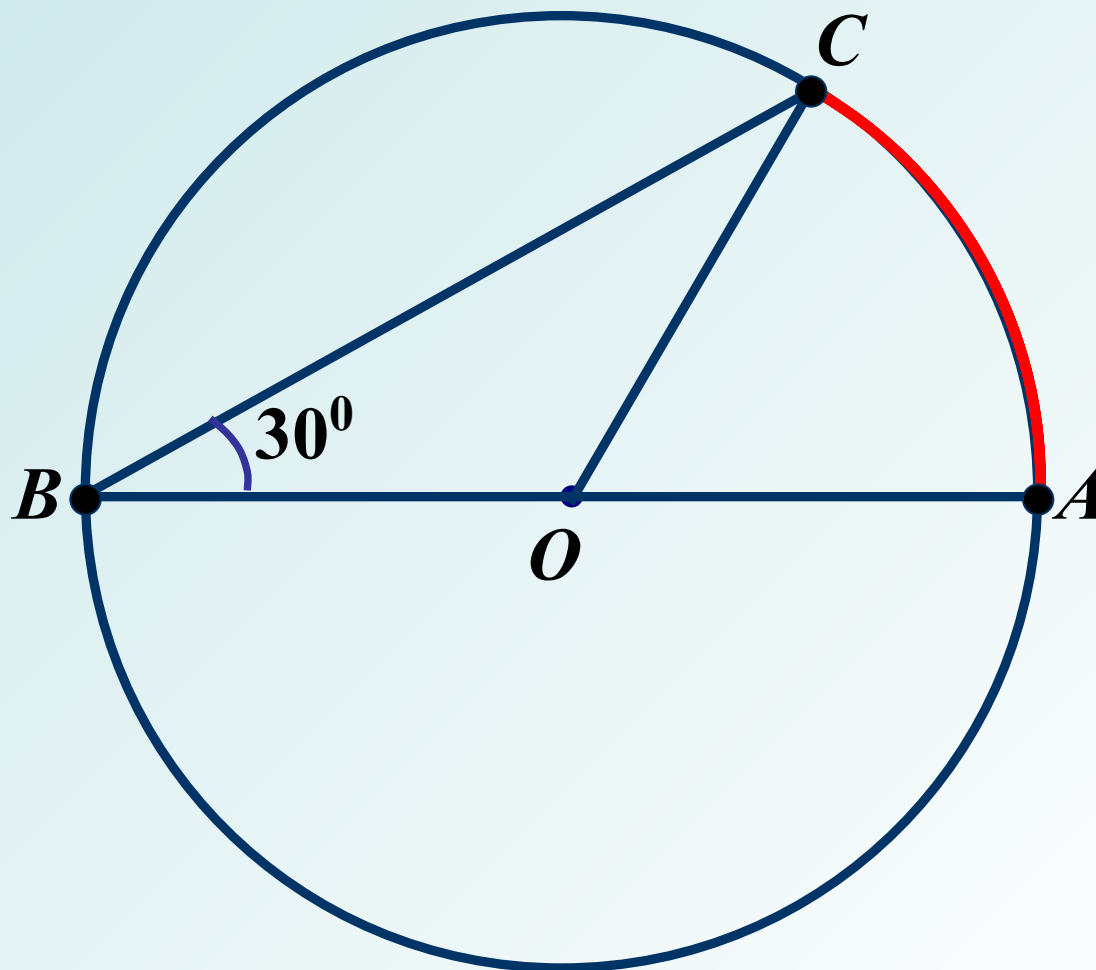
**Найти:**  $\cup \hat{I}A$  ,  $\cup NK$  ,  $\cup KE$



16.

Дано:  $\widehat{ACB} (I, R)$

Найти:  $\cup \widehat{AN}$

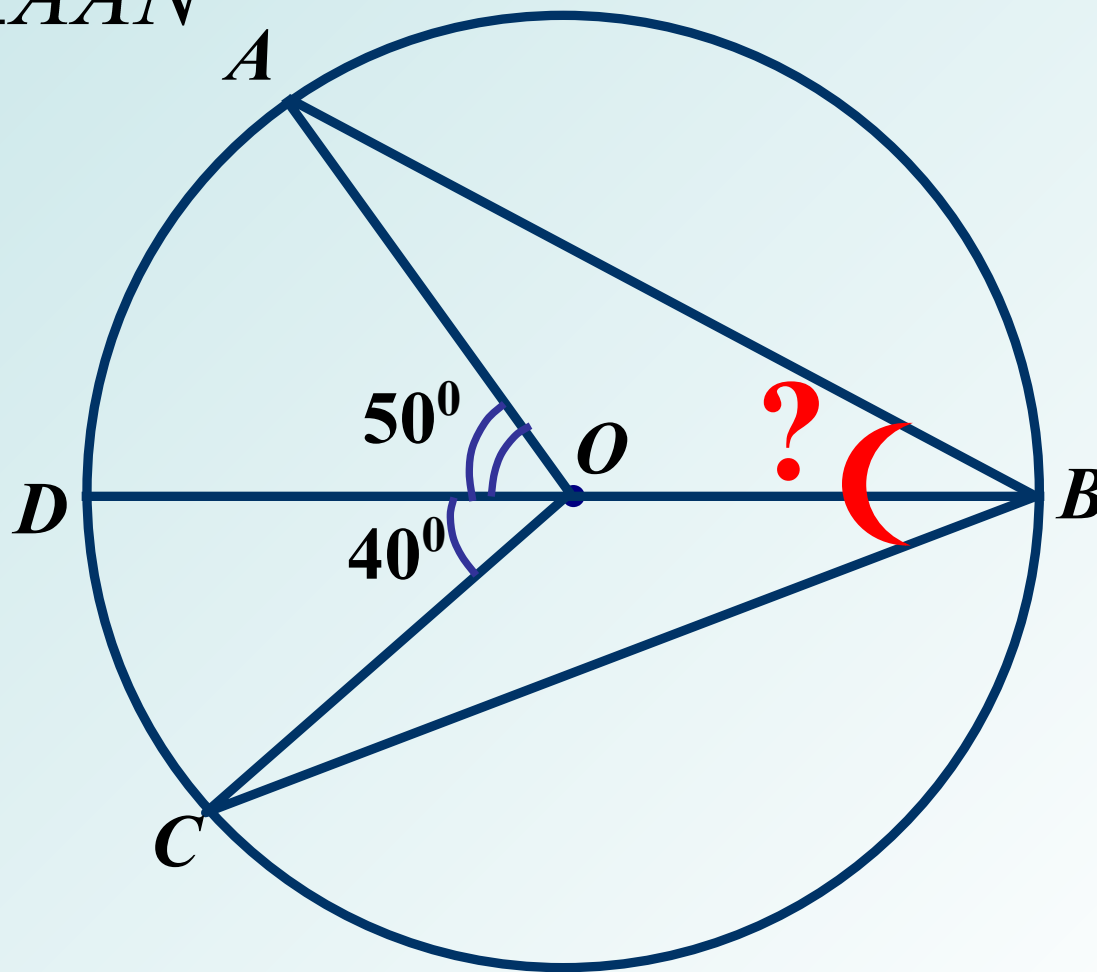


17.

Дано:  $\hat{I} \hat{e} \hat{o} . (\hat{I} , R)$

Найти:

$\angle A \hat{A} \tilde{N}$



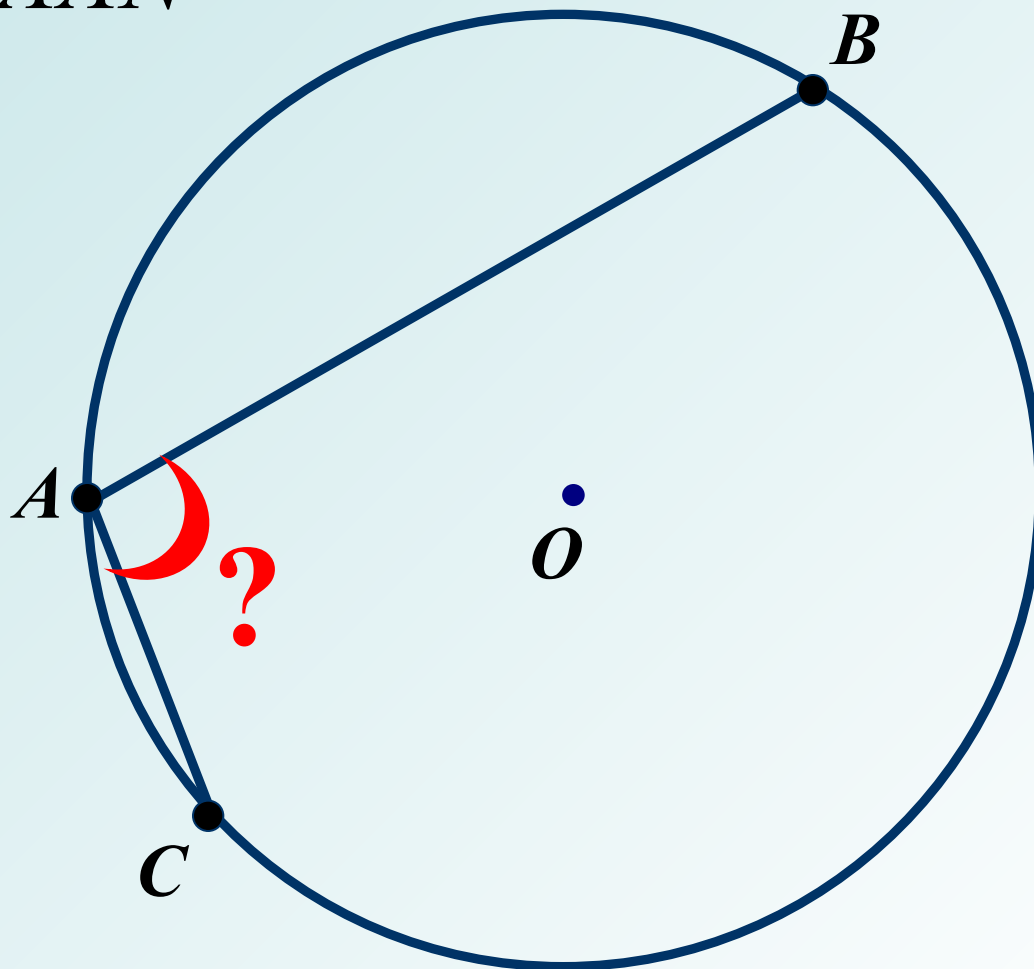
18.

**Дано:**

$\hat{I} \in \odot (I, R)$   
 $\cup \hat{A}\tilde{N} = 43^\circ, \cup \hat{A}\hat{A} = 115^\circ$

**Найти:**

$\angle \hat{A}\hat{A}\tilde{N}$



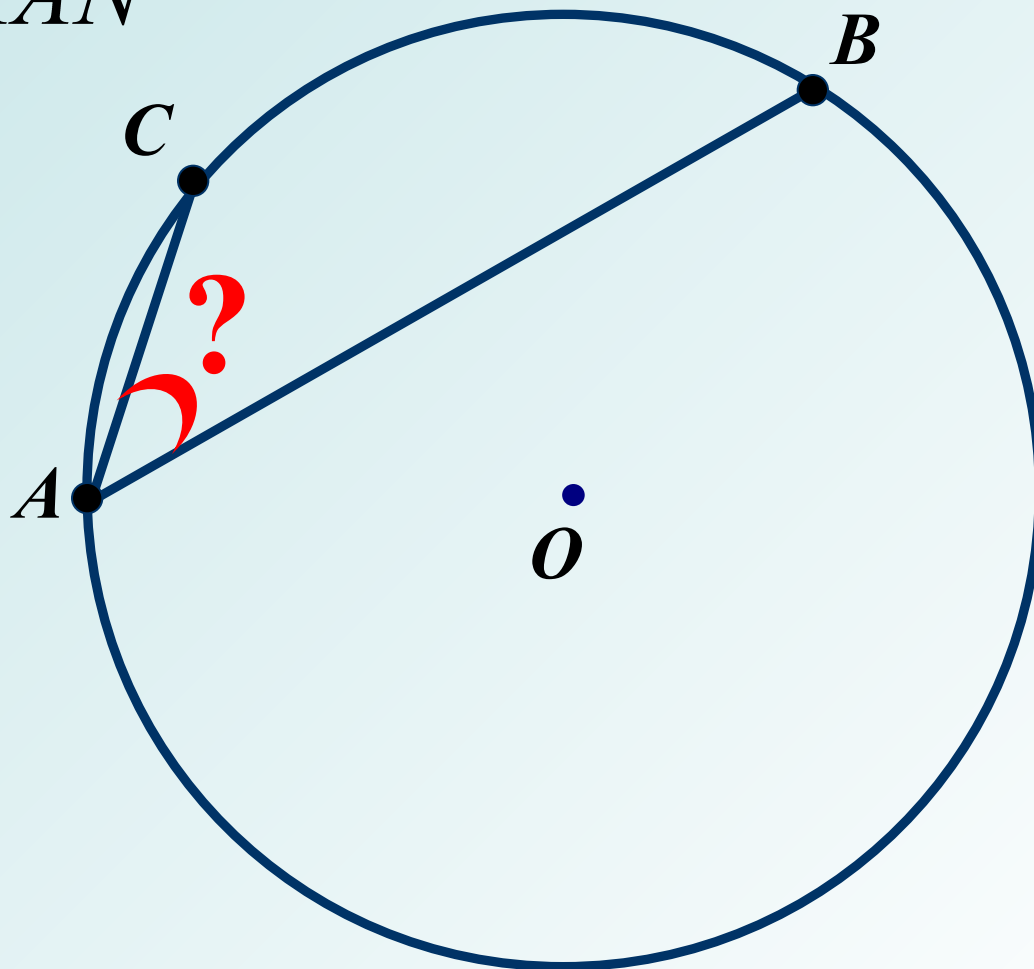
19.

*Дано:*

$$\widehat{I\hat{e}\delta} \cdot (\hat{I}, R) \cup \hat{A}\hat{N} = 43^{\circ}, \cup \hat{A}\hat{A} = 115^{\circ}$$

*Найти:*

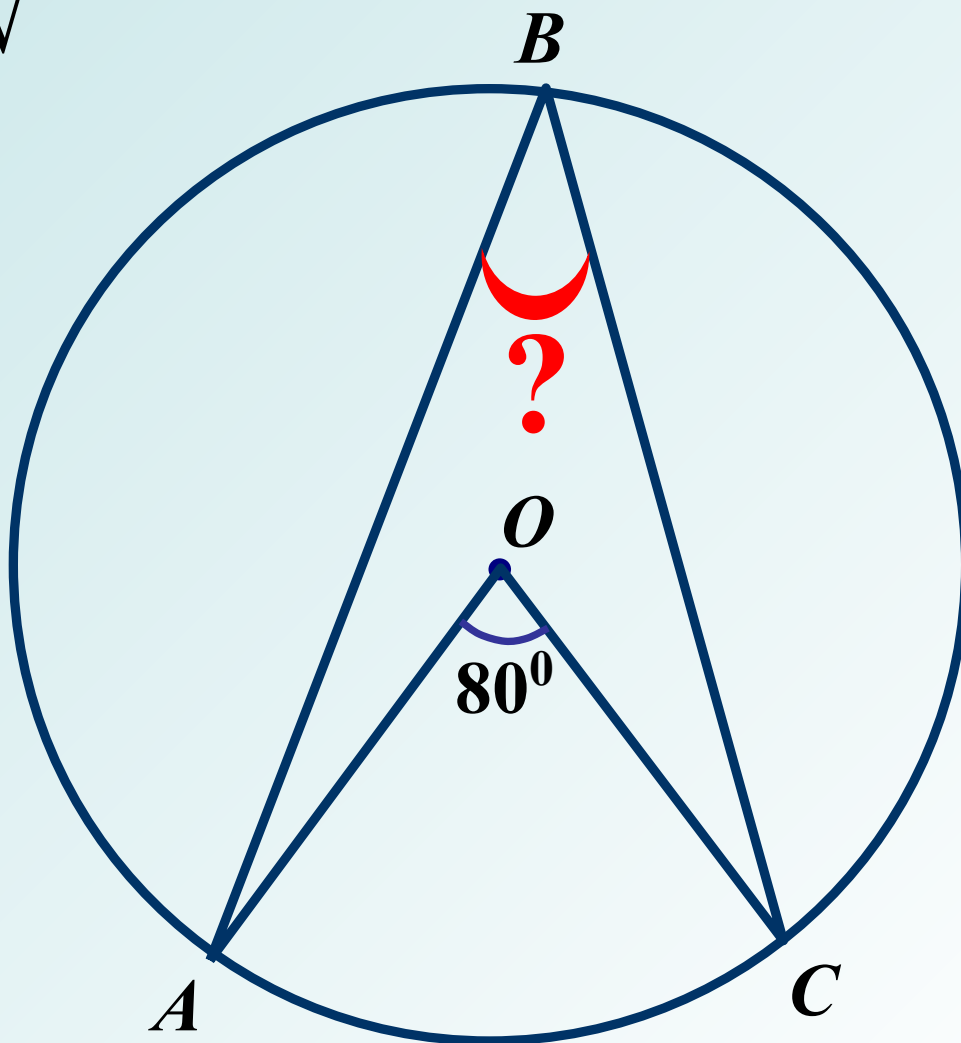
$$\angle \hat{A}\hat{A}\hat{N}$$



20.

Дано:  $\triangle ABC$  вписан в  $\odot O$ .  $\angle AOC = 80^\circ$

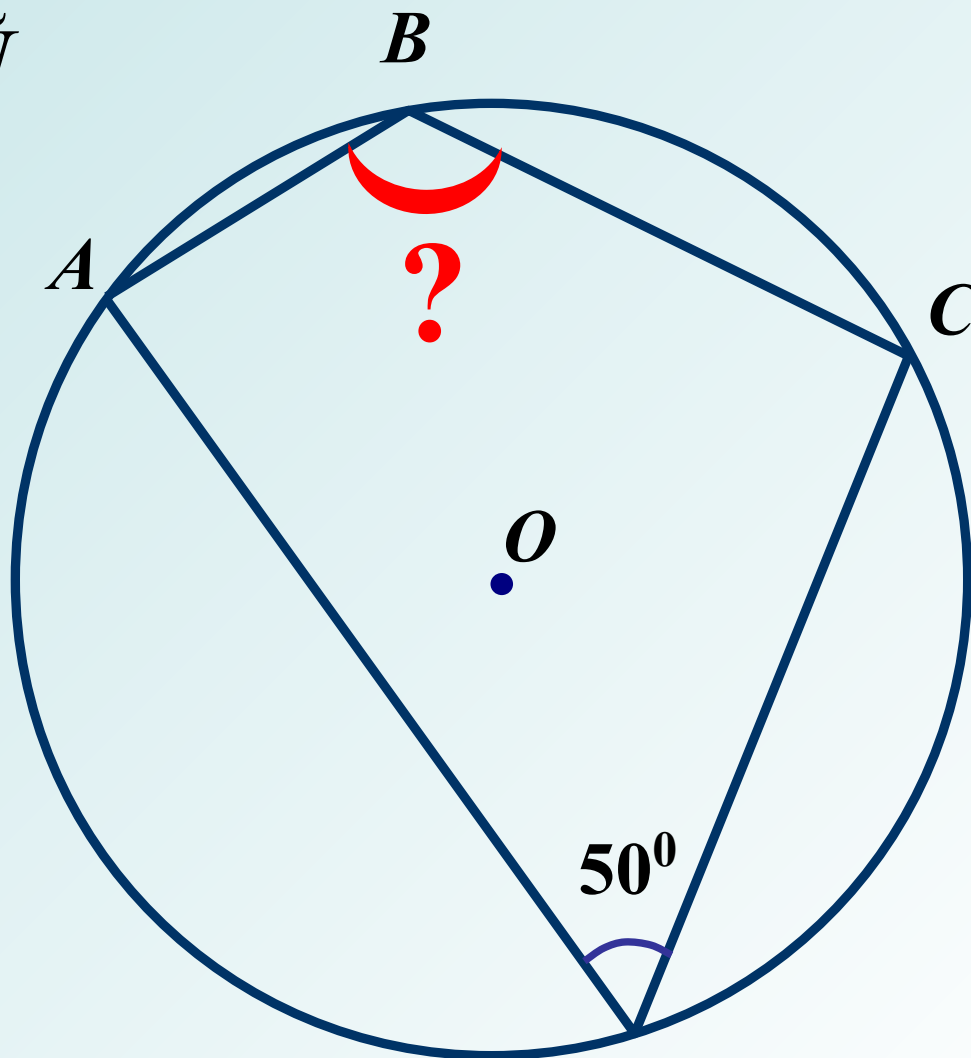
Найти:  $\angle ABC$



21.

Дано:  $\hat{I} \hat{e} \hat{o} .(\hat{I} , R)$

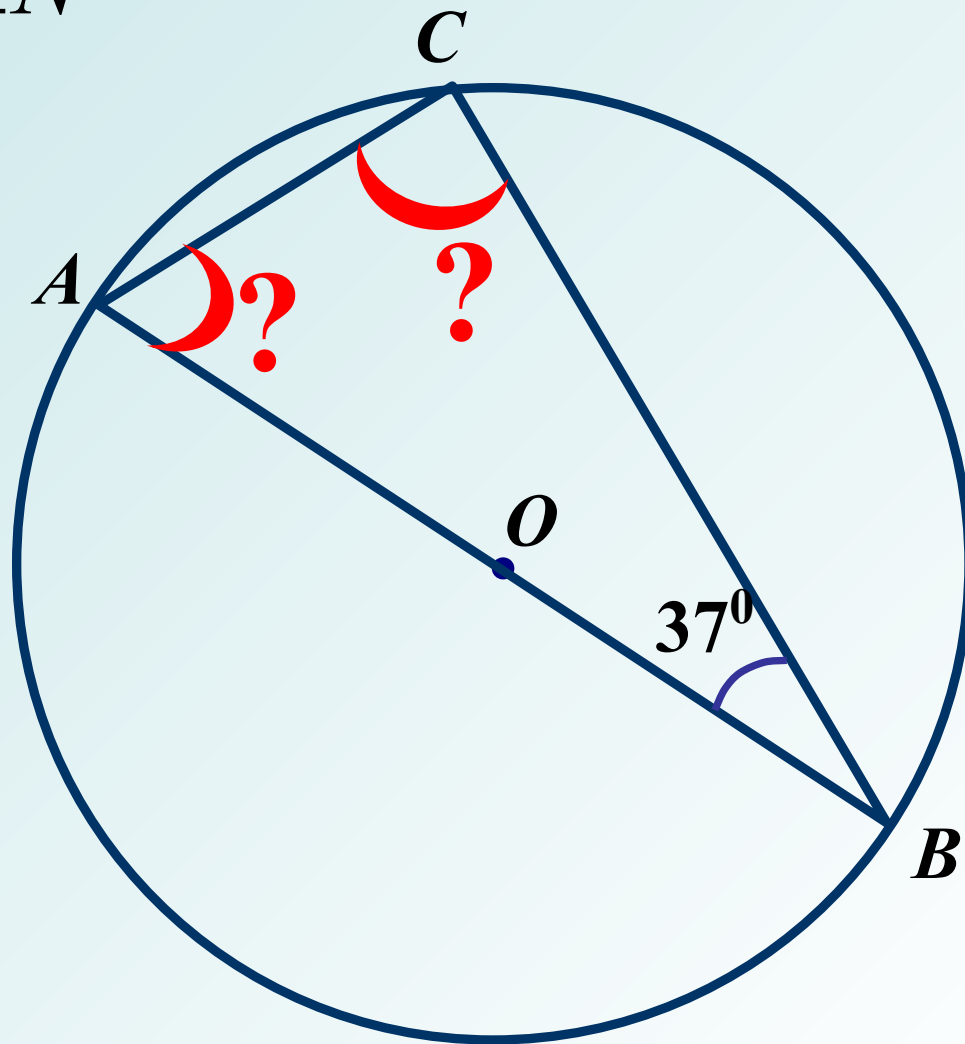
Найти:  $\angle A \hat{A} \tilde{N}$



22.

Дано:  $\triangle ABC$  вписан в  $(I, R)$

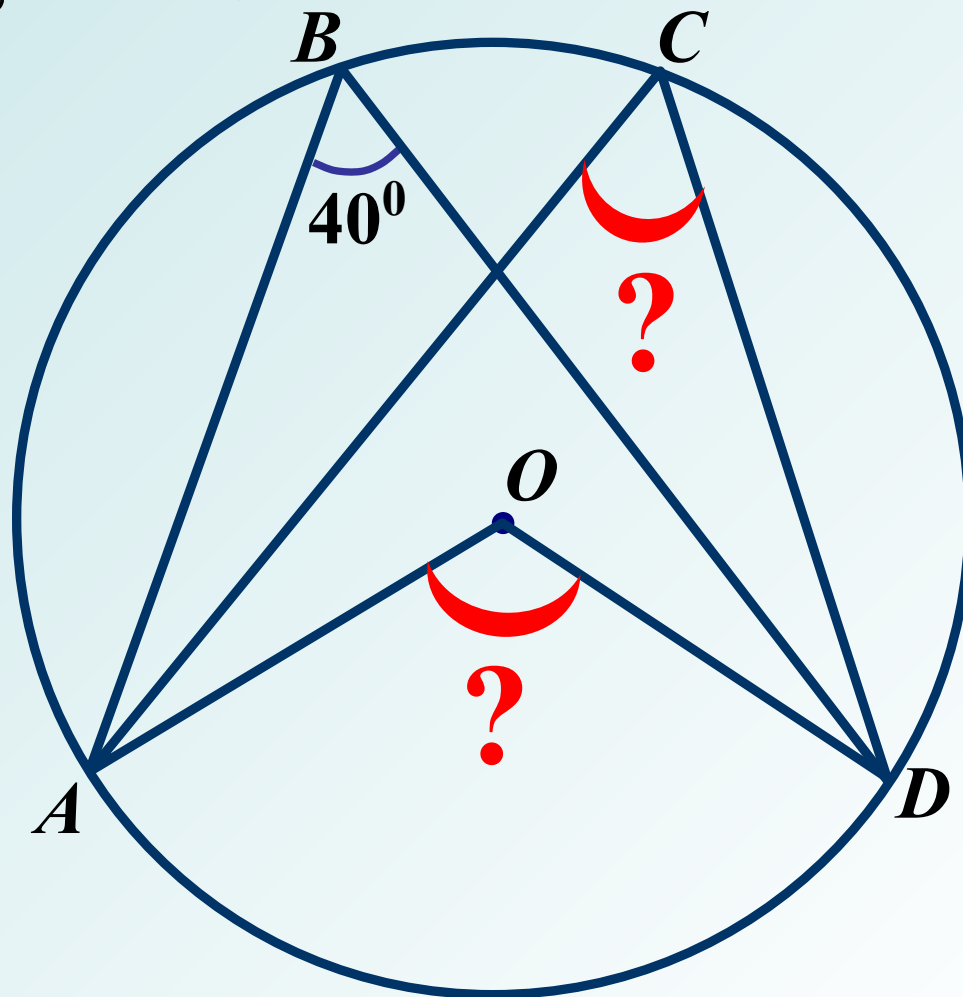
Найти:  $\angle A$ ,  $\angle C$



23.

Дано:  $\hat{I} \hat{e} \delta .(\hat{I} , R)$

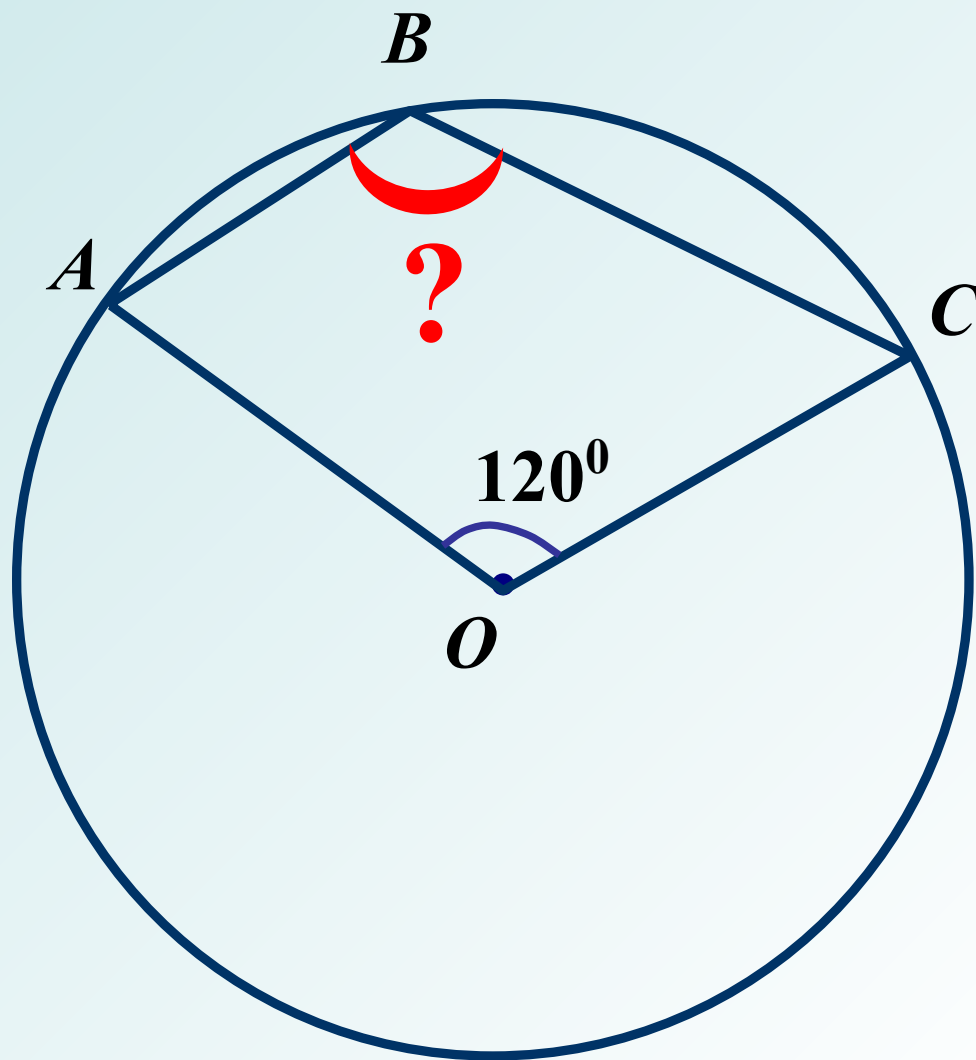
Найти:  $\angle AOD, \angle A\tilde{N}D$



24.

Дано:  $\triangle ABC$  вписан в  $(O, R)$

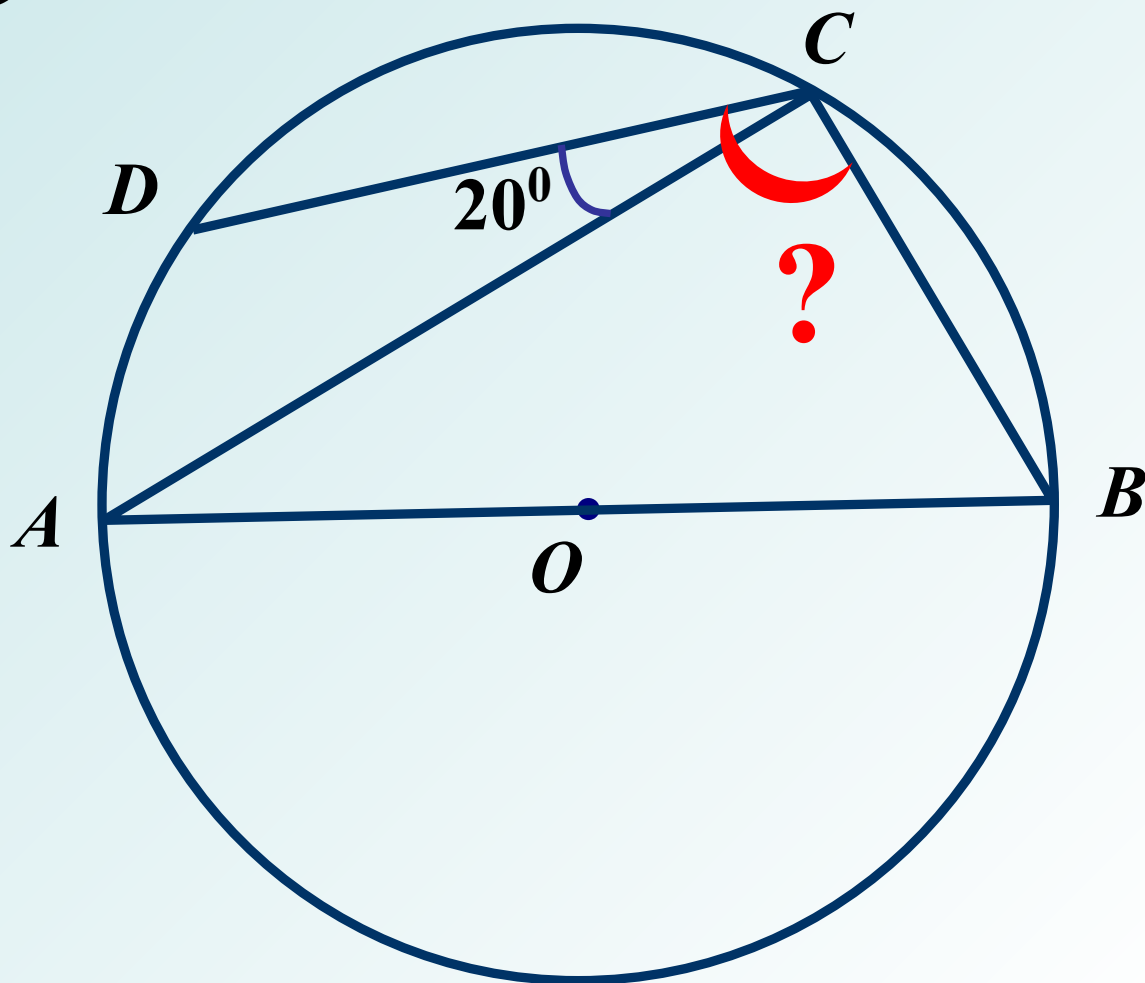
Найти:  $\angle A$



25.

Дано:  $\hat{I} \in \partial (I, R)$

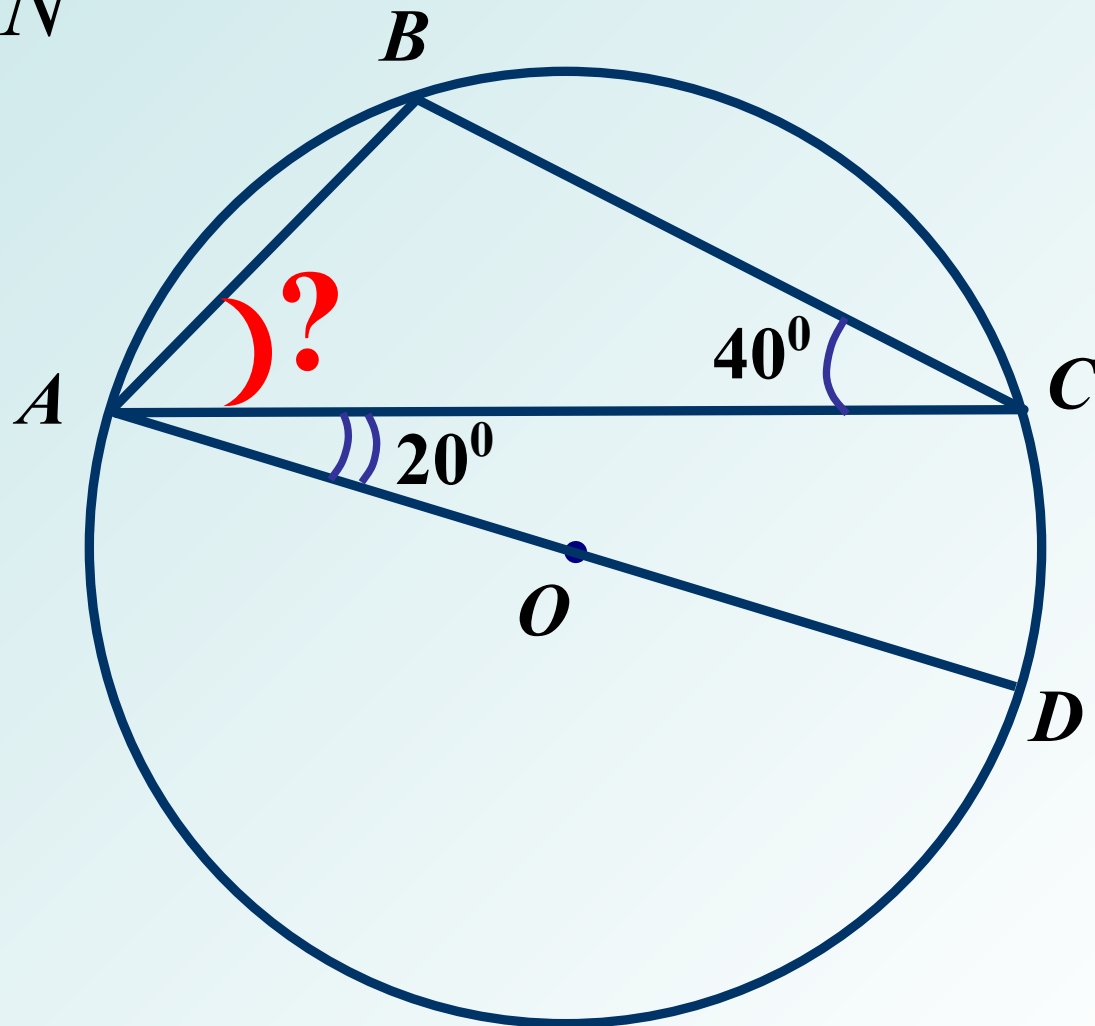
Найти:  $\angle \hat{A} \hat{N} D$



26.

Дано:  $\hat{I}\hat{e}\delta .(\hat{I} , R)$

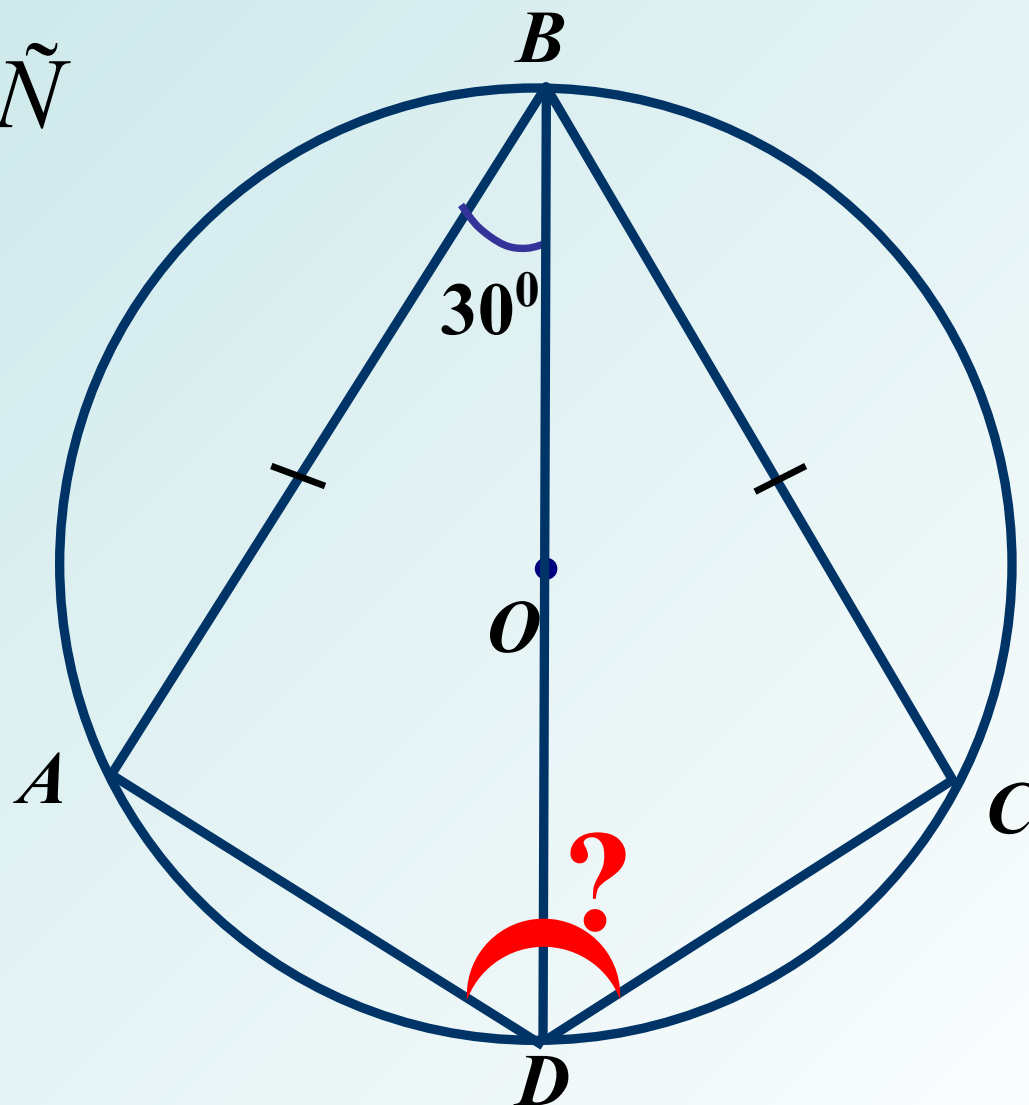
Найти:  $\angle \hat{A}\hat{A}\tilde{N}$



27.

Дано:  $\hat{I} \hat{e} \delta . (\hat{I} , R)$

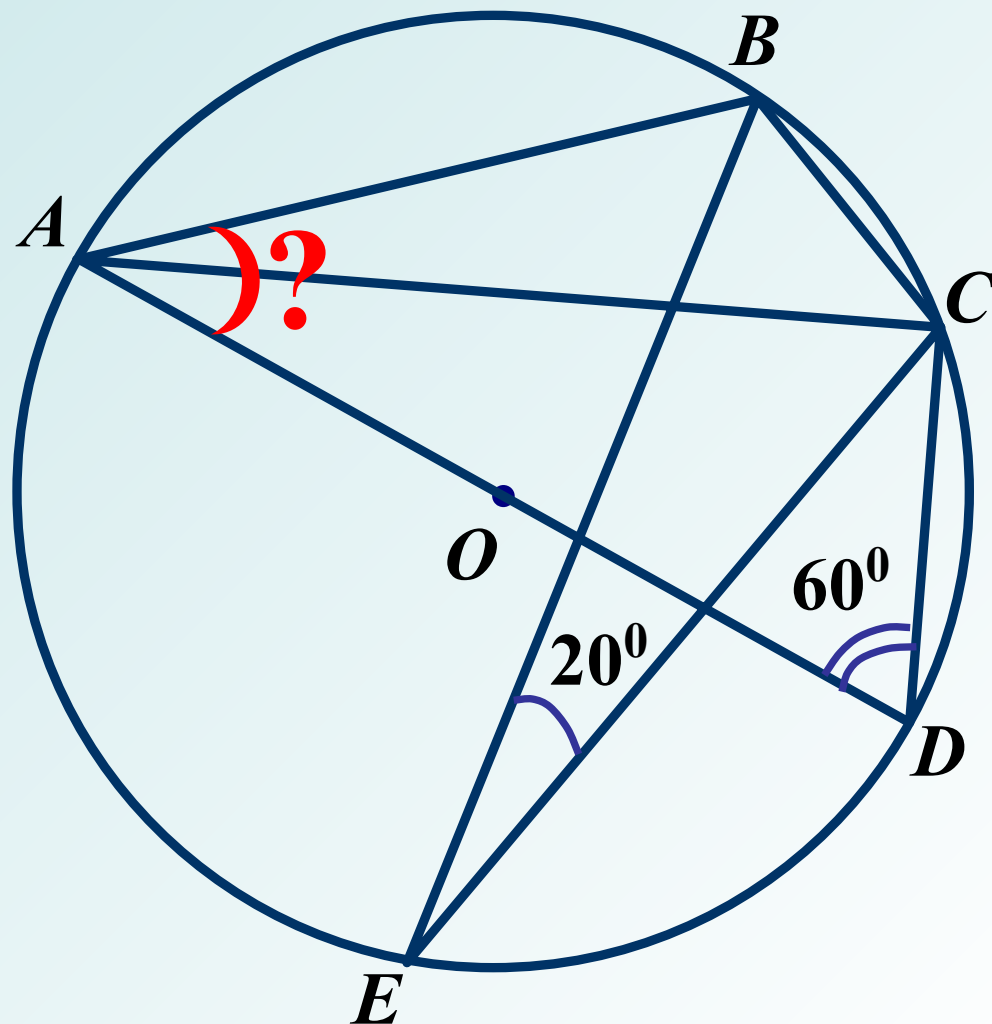
Найти:  $\angle AD\tilde{N}$



28.

Дано:  $\hat{I} \hat{e} \hat{O} . (\hat{I} , R)$

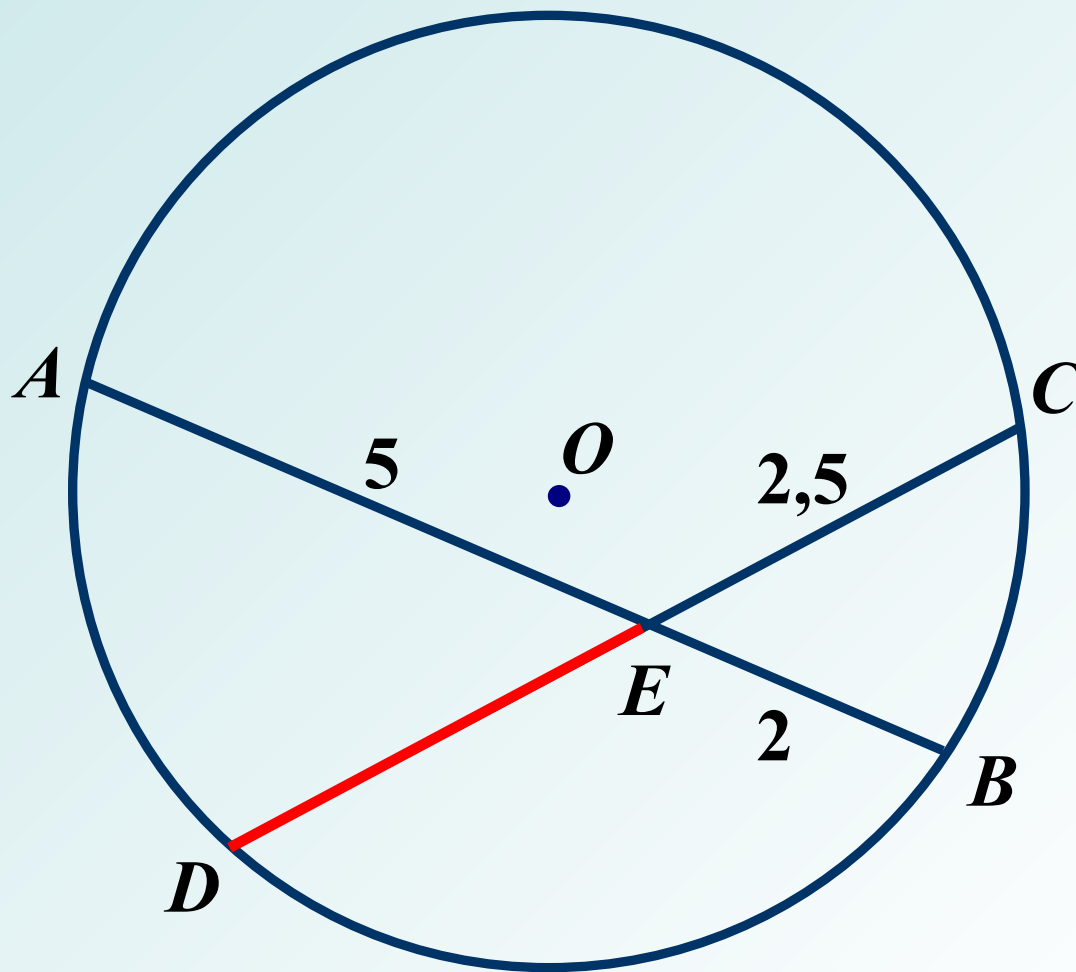
Найти:  $\angle BAD$



29.

Дано:  $\hat{I} \hat{e} \delta .(I, R)$

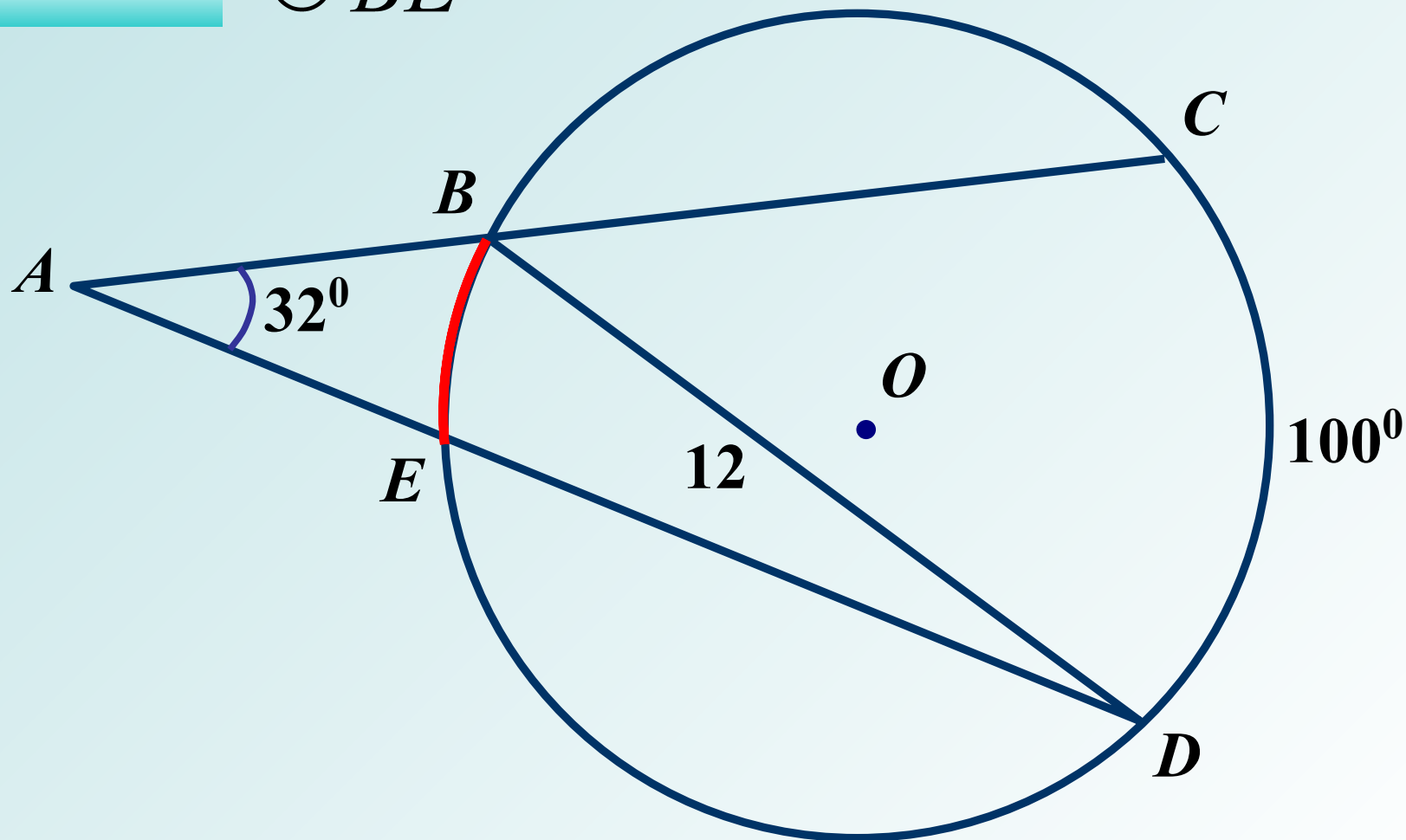
Найти:  $DE$



30.

**Дано:**  $\hat{I} \hat{e} \delta . (\hat{I} , R), \cup CD = 100^0$

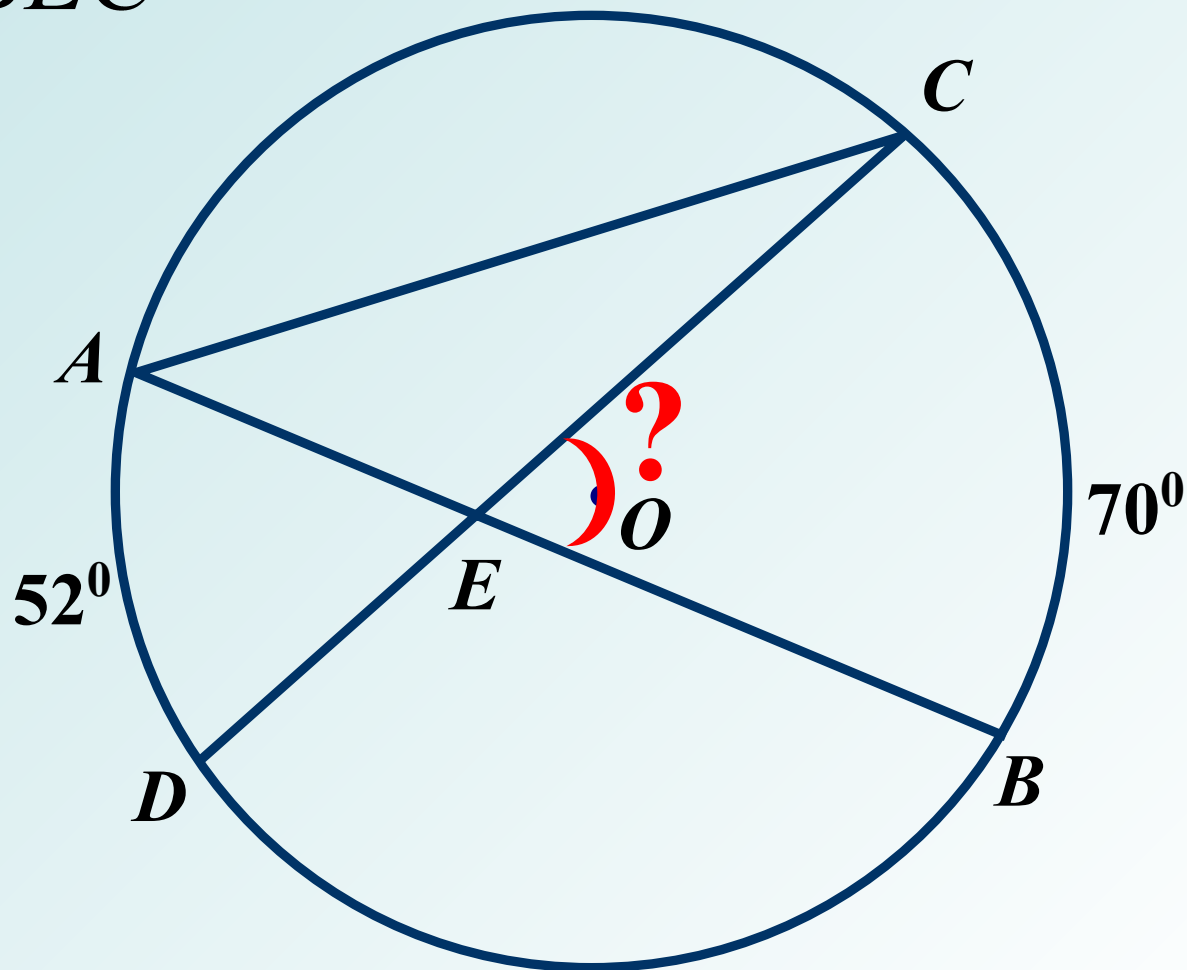
**Найти:**  $\cup BE$



31.

Дано:  $\hat{I} \hat{e} \hat{D} . (\hat{I} , R)$

Найти:  $\angle BEC$



32.

Дано:  $\triangle ABC$  вписан в  $(I, R)$

Найти:  $\angle A, \angle C, \angle AOC$

