Решение задач.

7 класс.

II часть.

"Начальные геометрические сведения"

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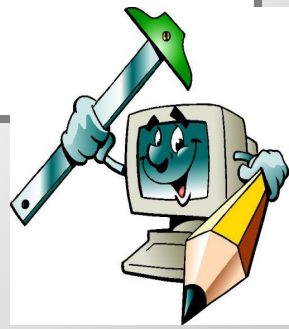
Смежные и вертикальные углы.

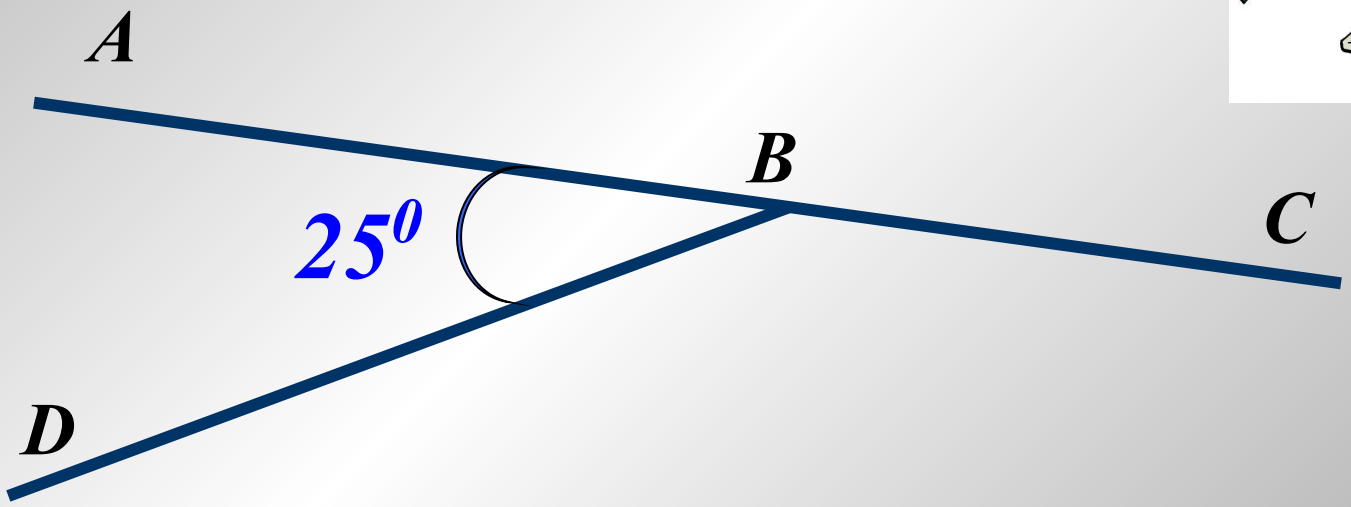
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15

1.

Дано: $\angle ABD = 25^0$

Найти: $\angle CBD$



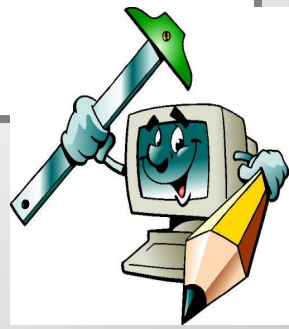


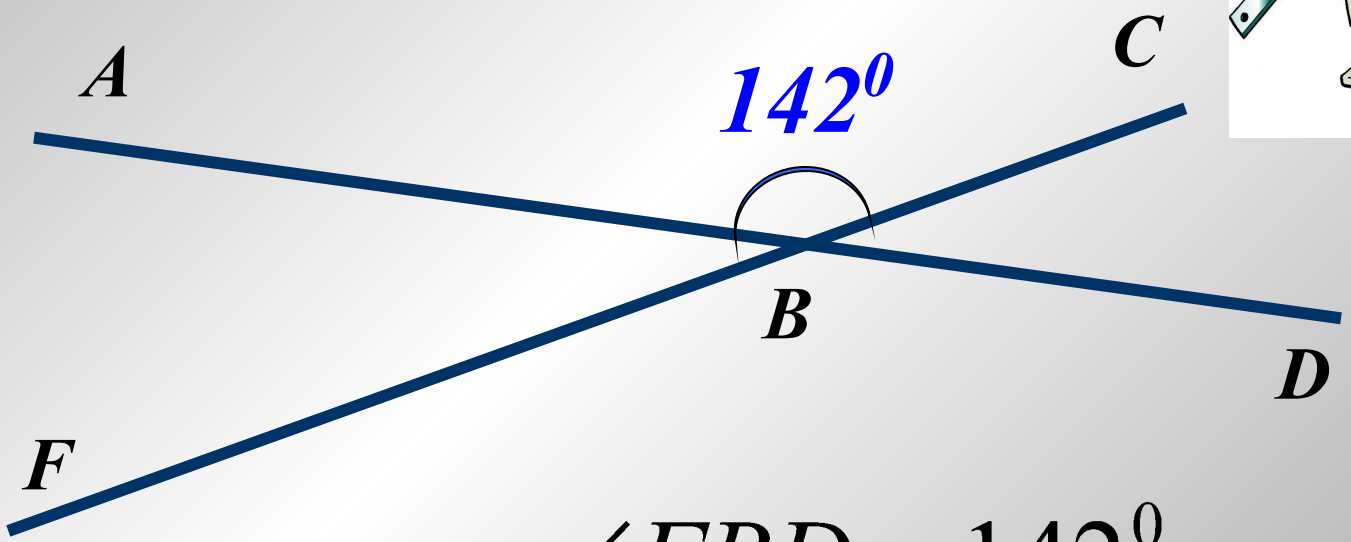
Ответ: $\angle CBD = 155^0$

2.

Дано: $\angle ABC = 142^0$

Найти: $\angle FBD, \angle ABF, \angle CBD$





$\angle FBD = 142^0$

$\angle ABF = 38^0$

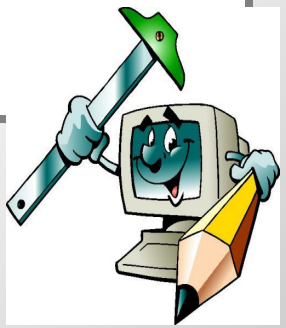
Ответ:

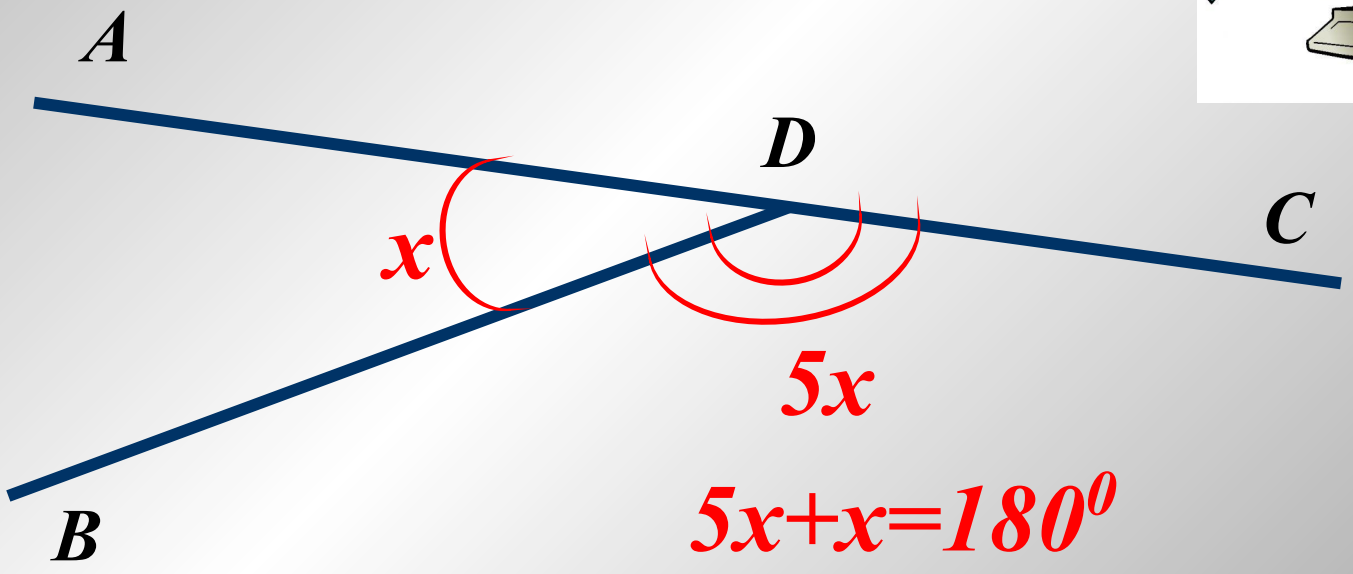
$\angle CBD = 38^0$

3.

Дано: $\angle ADB < \angle BDC$ в 5 раз

Найти: $\angle ADB, \angle BDC$





$5x+x=180^0$

Подсказка.

$\angle ADB = 30^0$

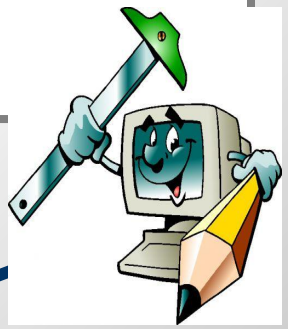
Ответ:

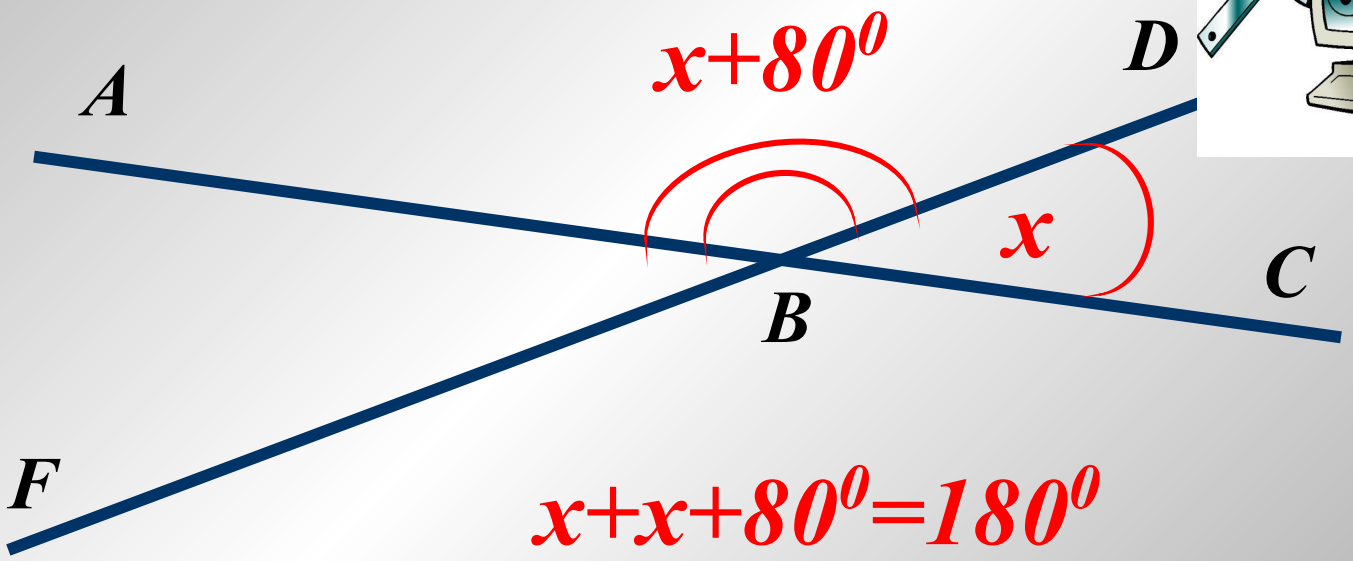
$\angle BDC = 150^0$

4.

Дано: $\angle DBC < \angle ABD$ на 80^0

Найти: $\angle DBC, \angle FBC$





Подсказка.

$\angle DBC = 50^0$

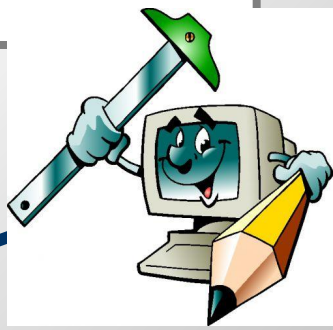
Ответ:

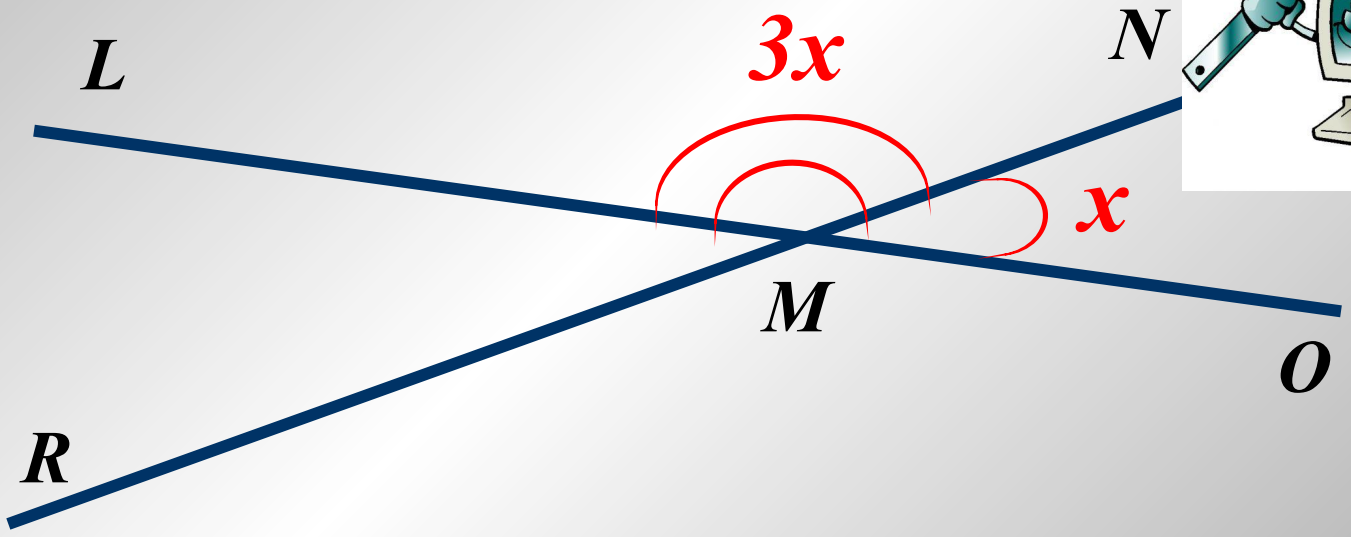
$\angle FBD = 130^0$

5.

Дано: $\angle NMO : \angle LMN = 1:3$

Найти: $\angle NMO, \angle LMN, \angle RMO, \angle LMR$





$$\angle NMO = \angle LMR = 45^0$$

$$\angle LMN = \angle RMO = 135^0$$

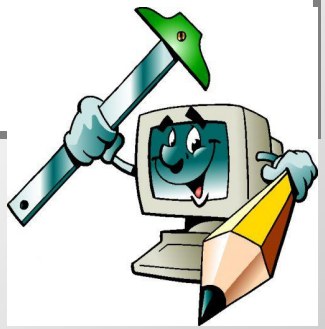
Подсказка.

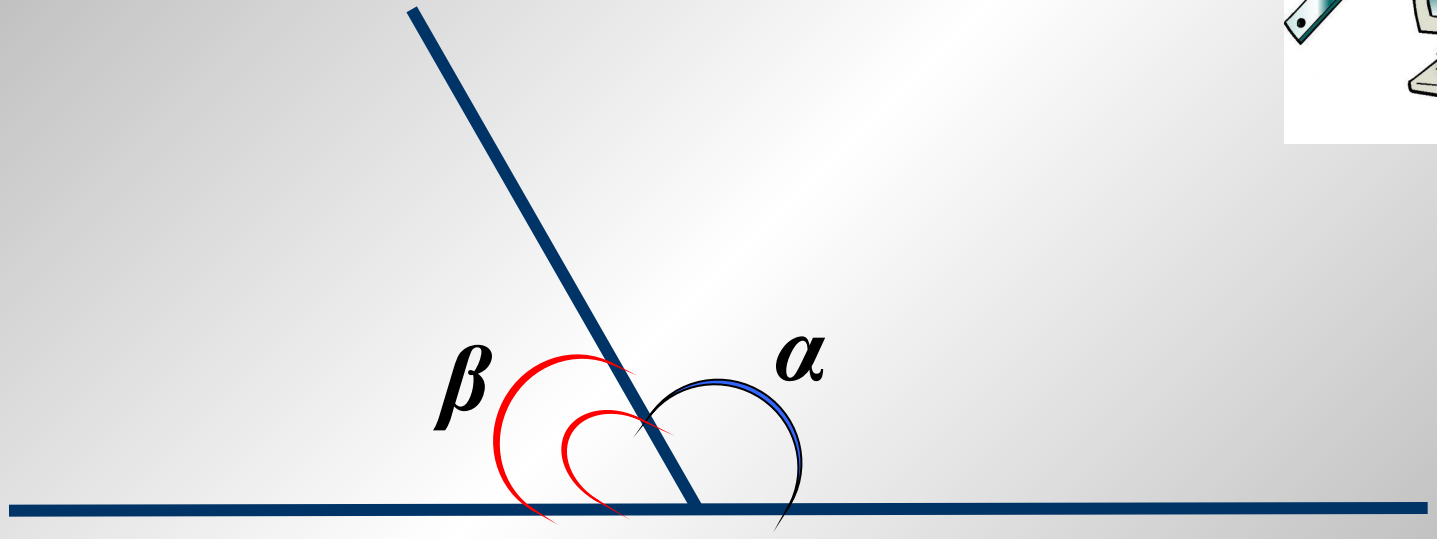
Ответ:

6.

Дано: $\alpha - \beta = 30^0$

Найти: α, β



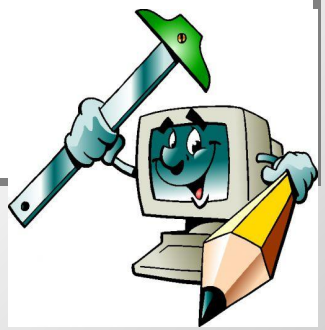


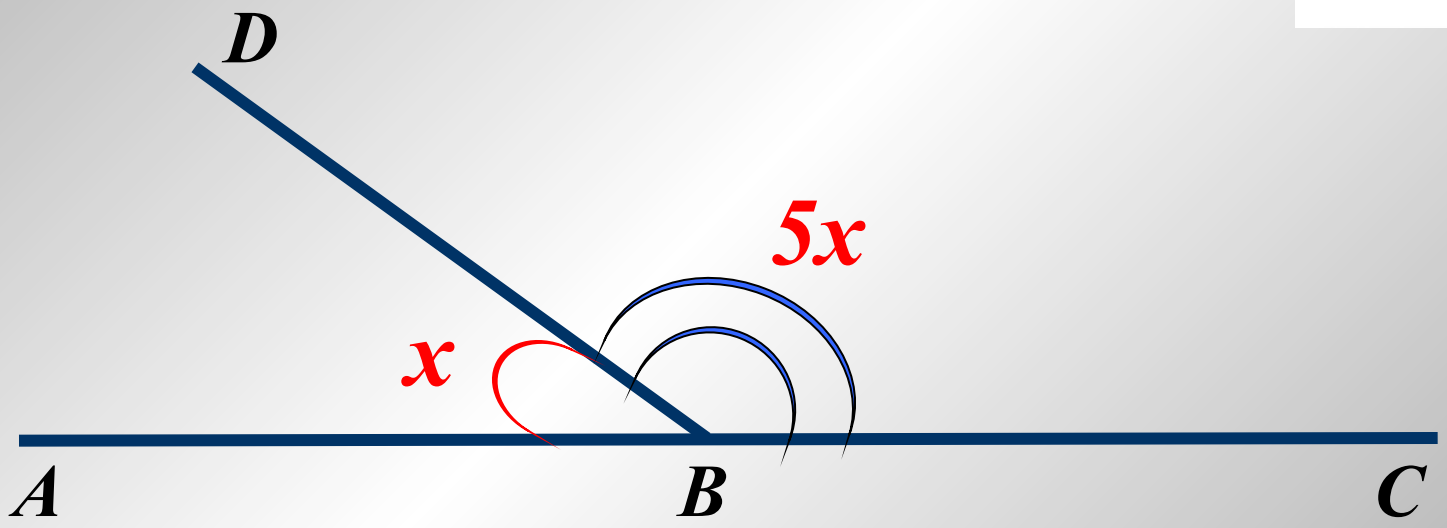
Ответ: $\alpha = 155^0, \beta = 75^0$

7.

Дано: $\angle ABD : \angle CBD = 1:5$

Найти: $\angle ABD, \angle CBD$





Подсказка.

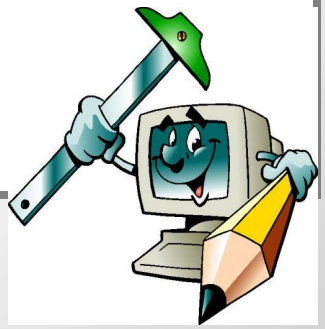
$\angle ABD = 30^0, \angle CBD = 150^0$

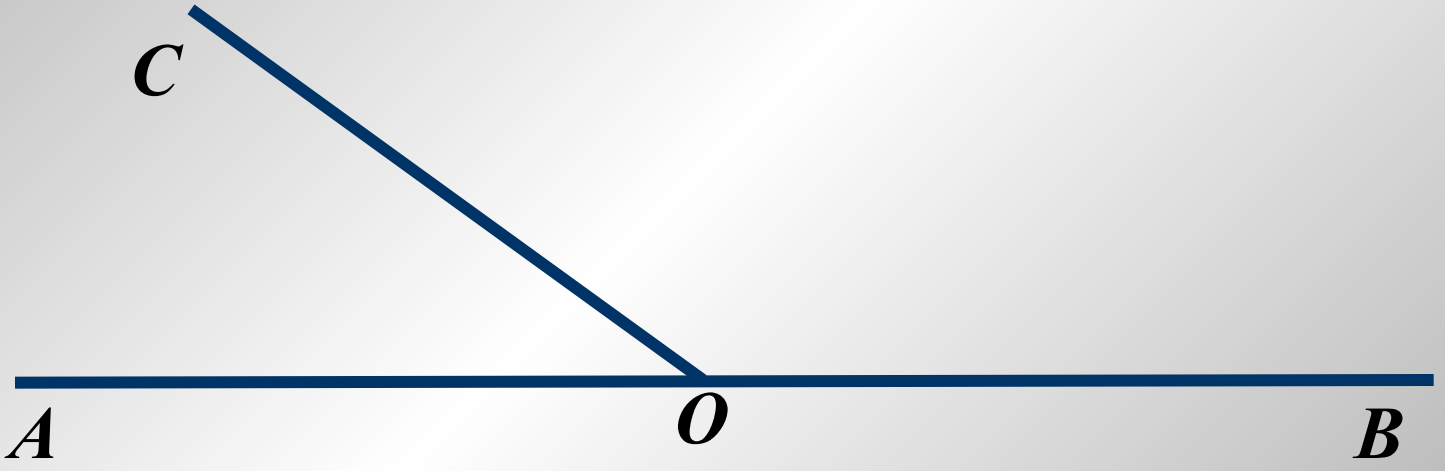
Ответ:

8.

Дано: $\angle BOC = \angle AOC + 90^0$

Найти: $\angle AOC, \angle BOC$





$\angle AOC = 45^0$

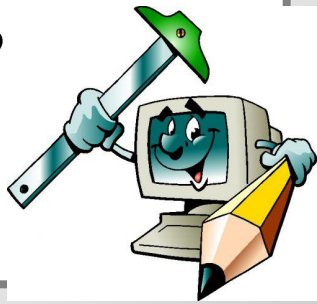
$\angle BOC = 135^0$

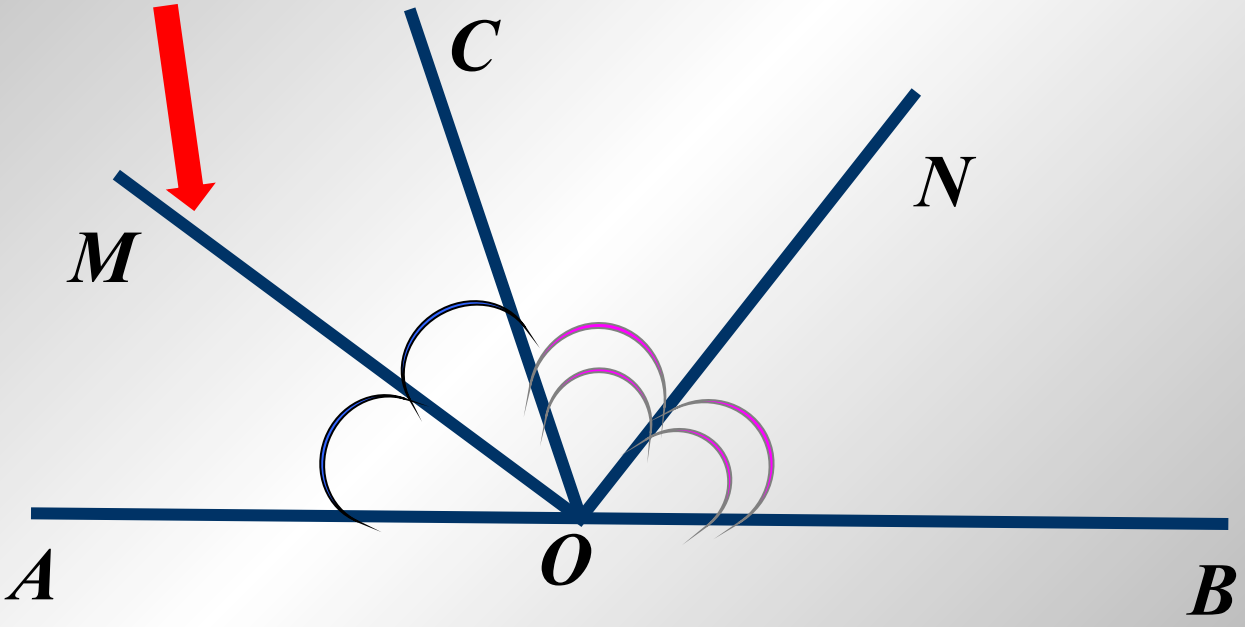
Ответ:

9.

Дано: $\angle AOC, \angle COB$ – *смежные*,
OM – *биссектриса* $\angle AOC$,
ON – *биссектриса* $\angle COB$

Найти: $\angle MON$



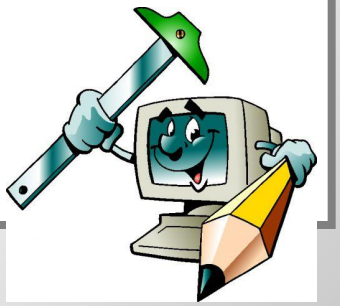


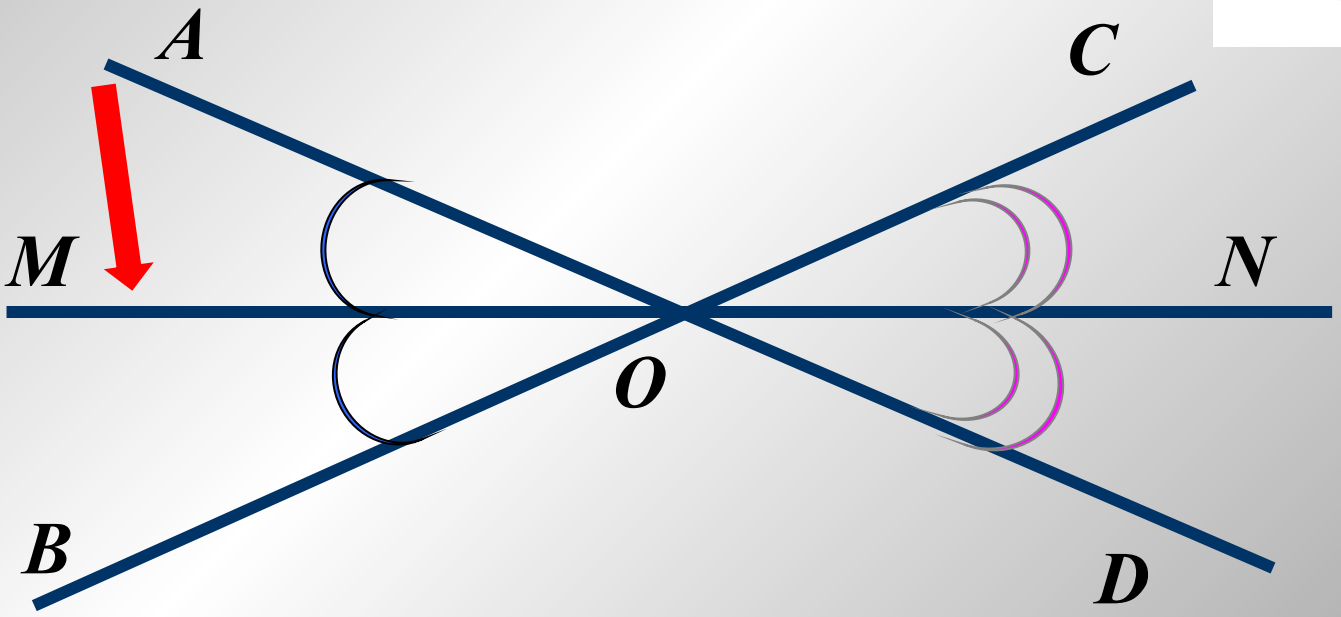
Ответ: $\angle MON = 90^0$

10.

Дано: $\angle AOB, \angle COD$ – вертикальные,
OM – биссектриса $\angle AOB$,
ON – биссектриса $\angle COD$

Найти: $\angle MON$





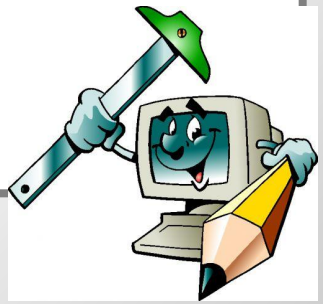
Ответ: $\angle MON = 180^0$

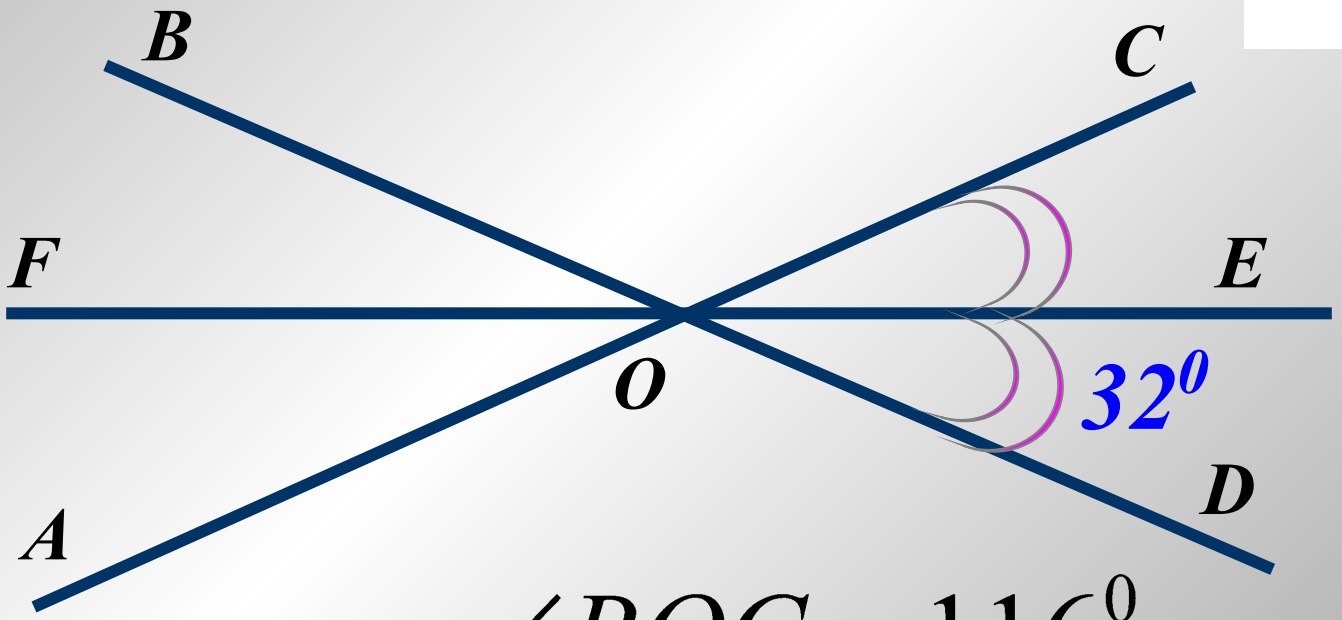
11.

Дано: $\angle DOE = 32^0$

OE – биссектриса $\angle COD$

Найти: $\angle BOC, \angle AOF$





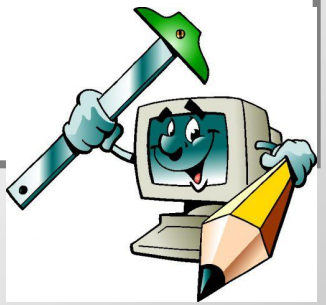
$\angle BOC = 116^0$

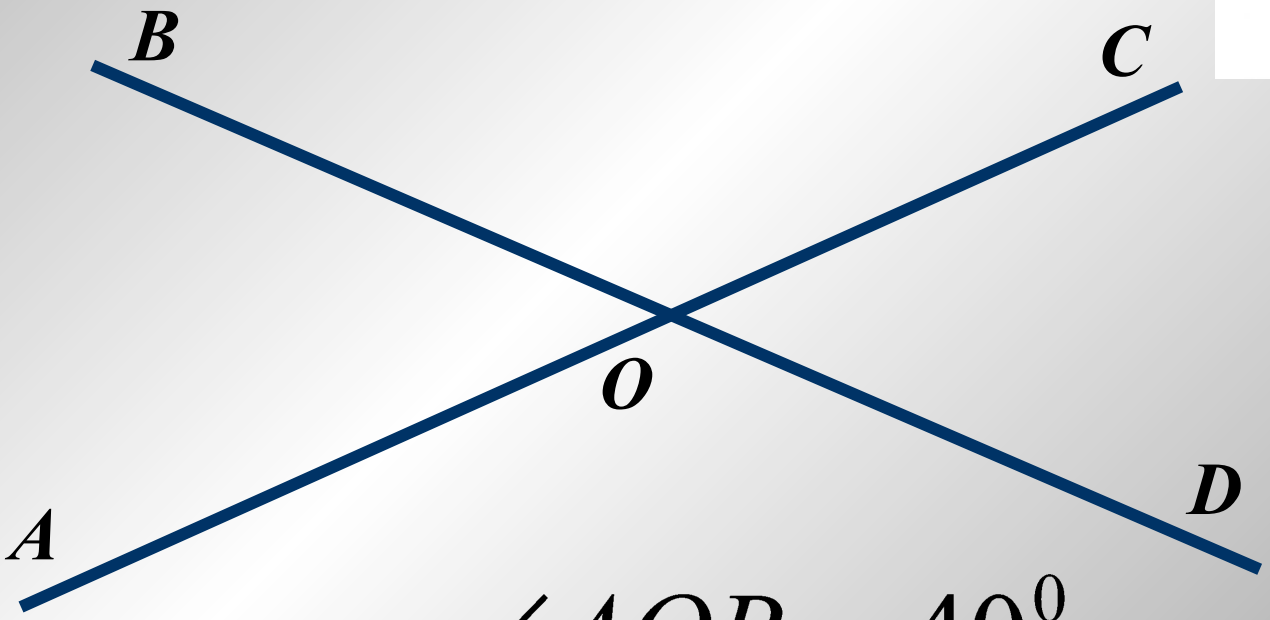
Ответ: $\angle AOF = 32^0$

12.

Дано: $\angle AOB = \frac{1}{8}(\angle BOC + \angle COD + \angle DOA)$

Найти: $\angle AOB, \angle BOC$





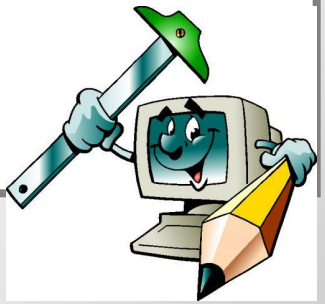
$$\angle AOB = 40^0$$

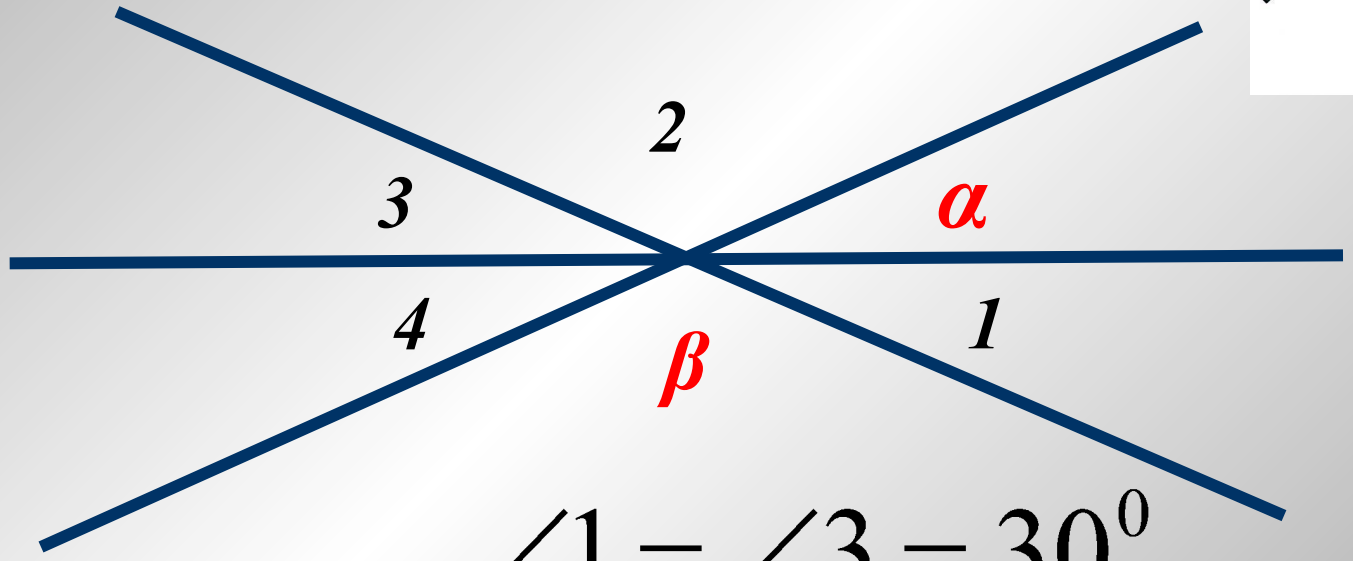
Ответ: $\angle BOC = 140^0$

13.

Дано: $\alpha = 20^0, \beta = 130^0$

Найти: $\angle 1, \angle 2, \angle 3, \angle 4$





$$\angle 1 = \angle 3 = 30^0$$

$$\angle 2 = \beta = 130^0$$

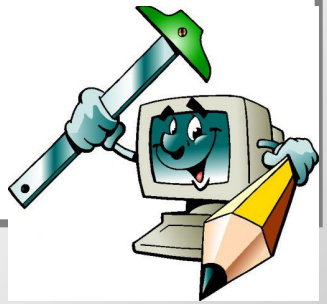
Ответ:

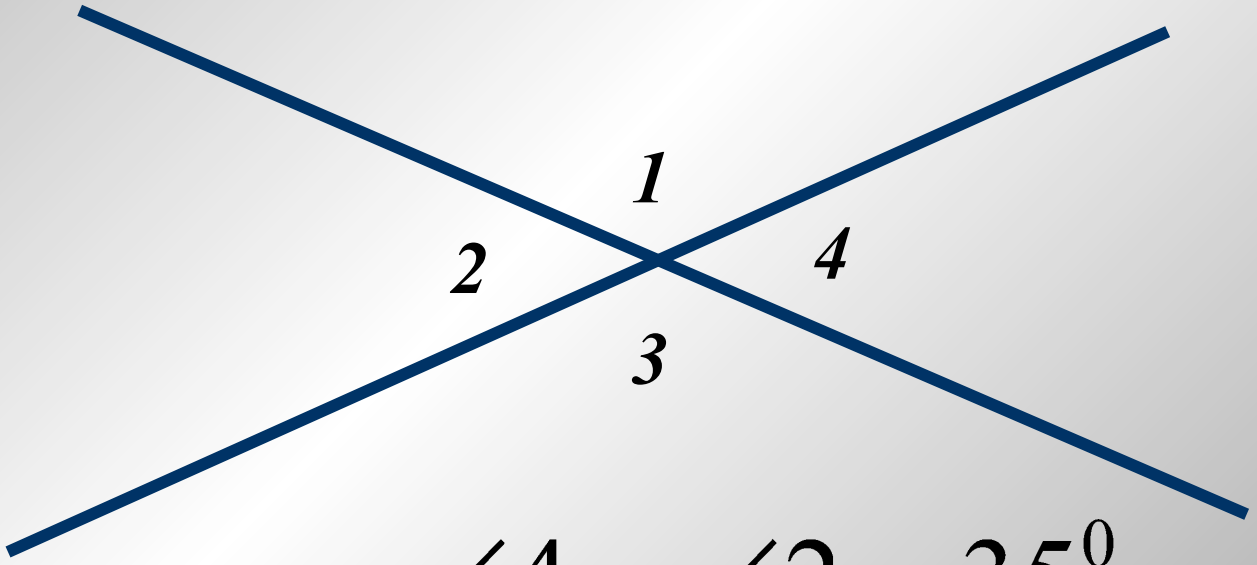
$$\angle 4 = \alpha = 20^0$$

14.

Дано: $\angle 1 + \angle 2 + \angle 3 = 325^0$

Найти: $\angle 1, \angle 2, \angle 3, \angle 4$





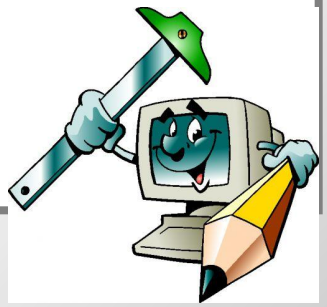
$\angle 4 = \angle 2 = 35^0$

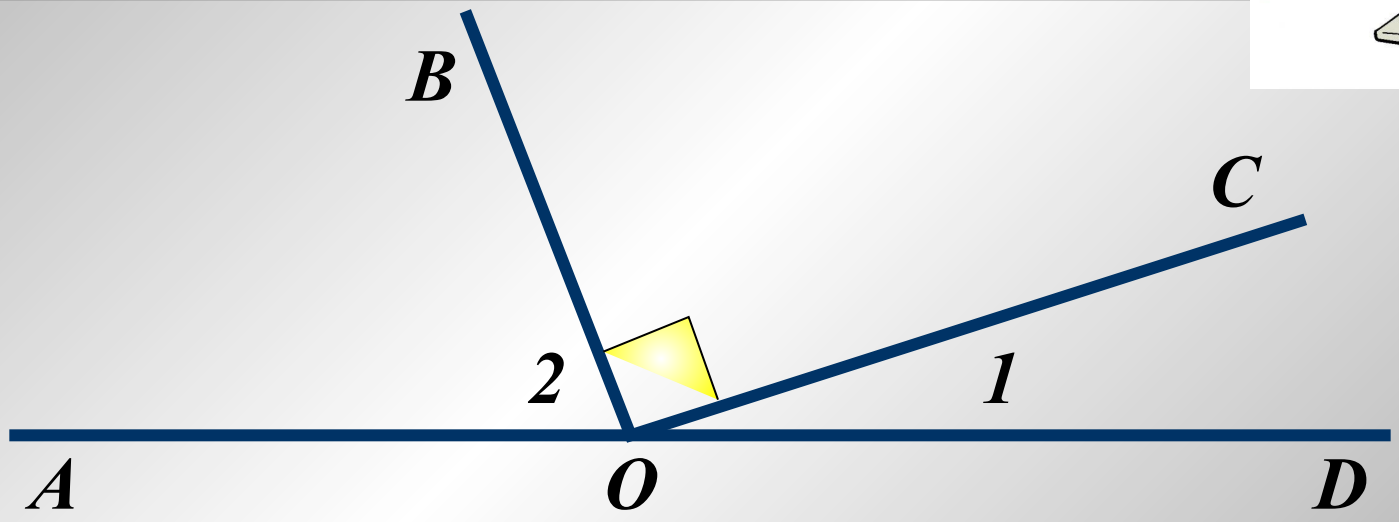
Ответ: $\angle 1 = \angle 3 = 145^0$

15.

Дано: $\angle BOC = 90^0, \angle 2 = 70^0$

Найти: $\angle 1$





Ответ: $\angle 1 = 20^0$

Используемые ресурсы:

1. Н.Ф.Гаврилова «Поурочные разработки по геометрии 7 класс. Универсальное издание. Москва «Вако» 2006г.

2. Картинка: http://www.biodat.ru/text/Podgotovka_k_EGE_1.html