

**СУММА УГЛОВ
ТРЕУГОЛЬНИКА**

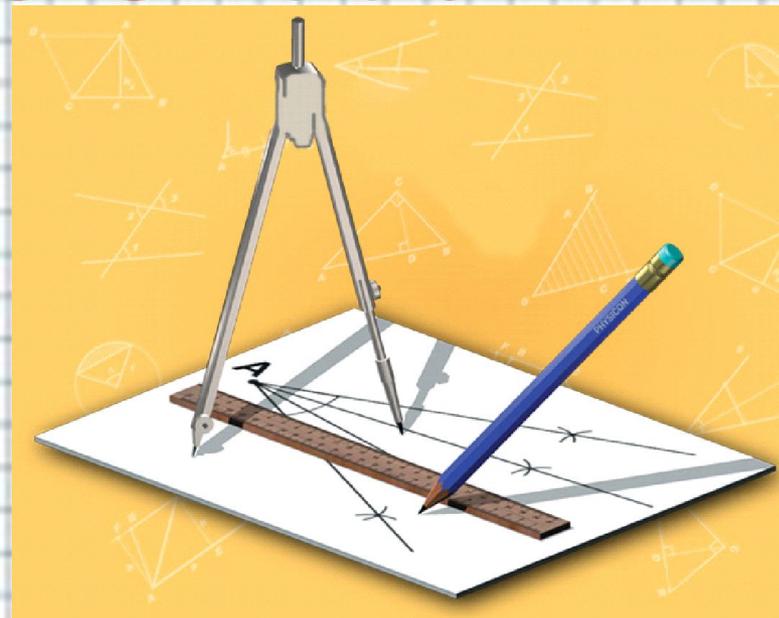
7 КЛАСС

Учитель математики

Козлова Н.В.

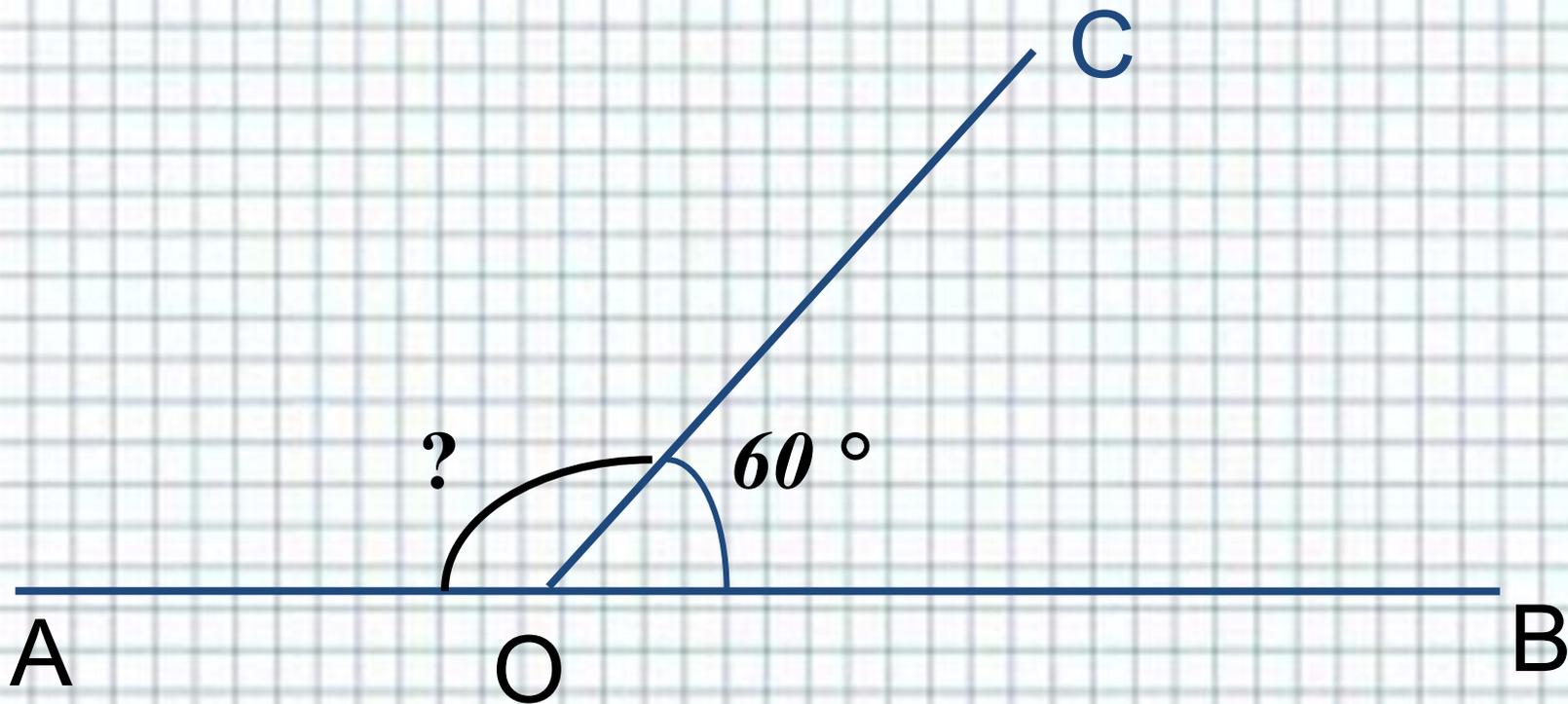


Повторим изученное ...

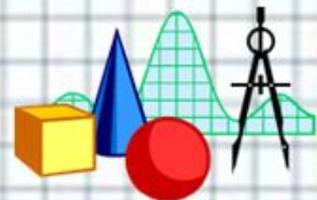




Смежные углы

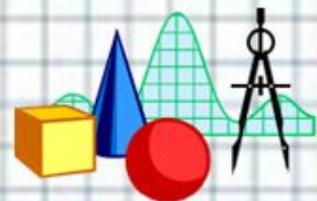
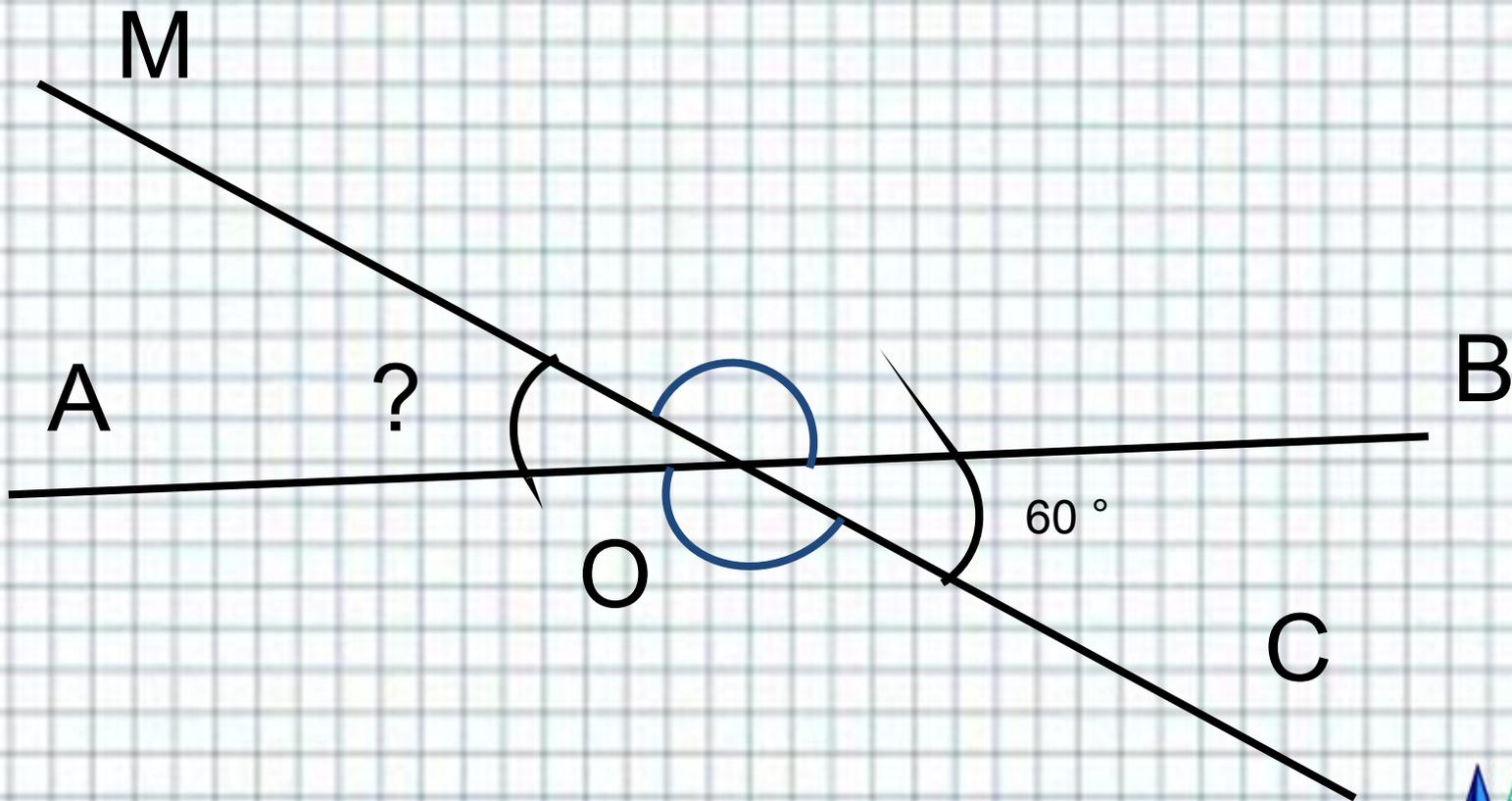


$$\angle AOC + \angle BOC = 180^\circ$$



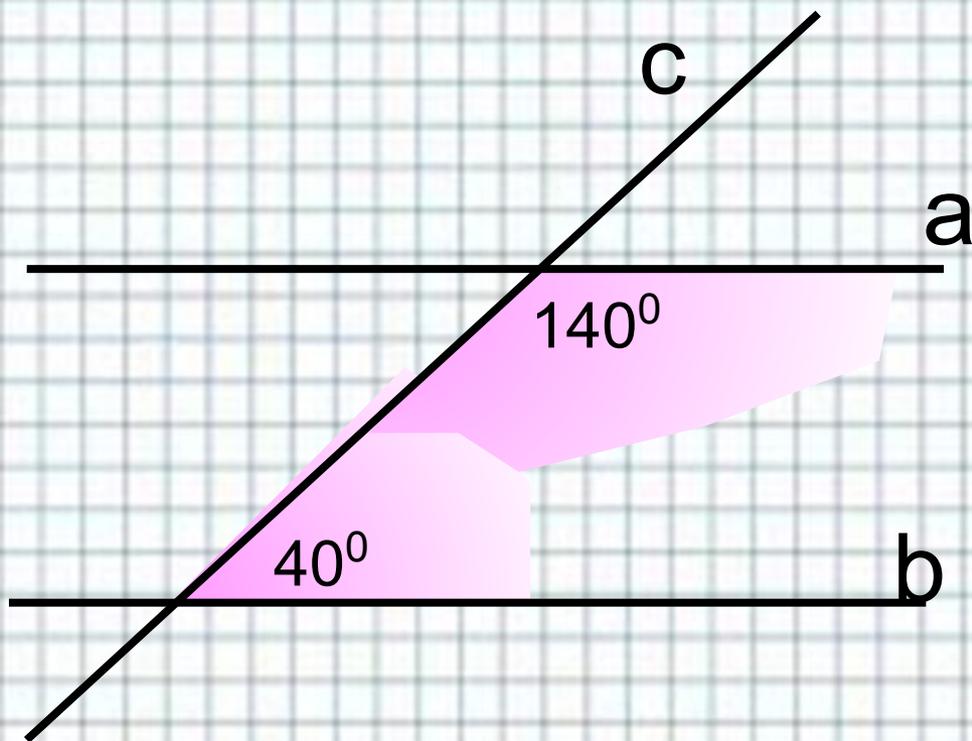


Вертикальные углы равны

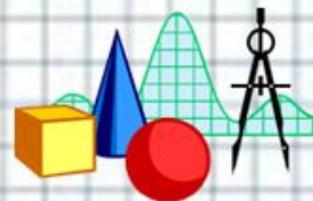




Сумма односторонних
углов равна 180°

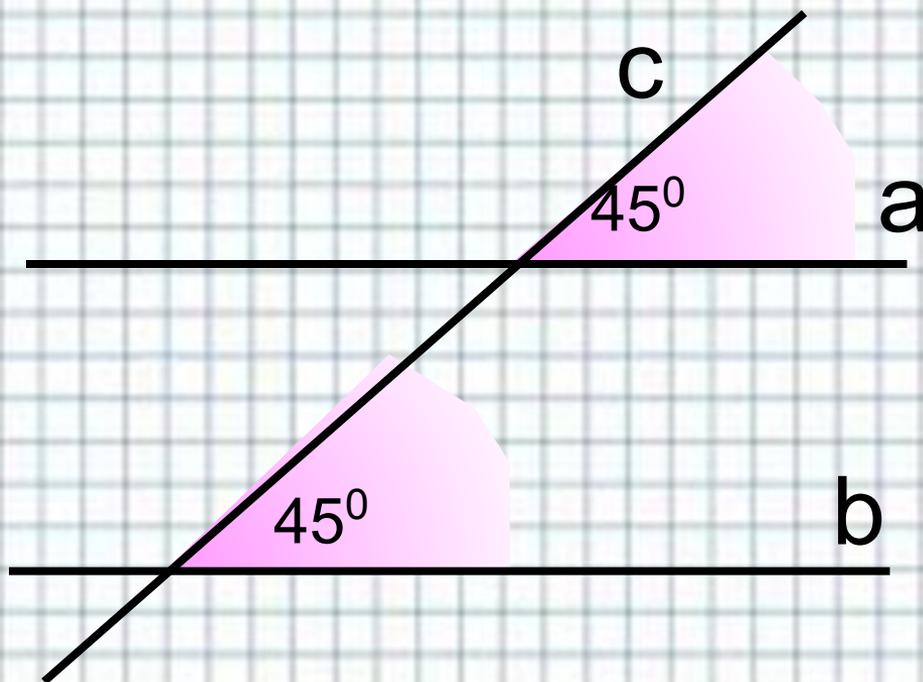


$a \parallel b$

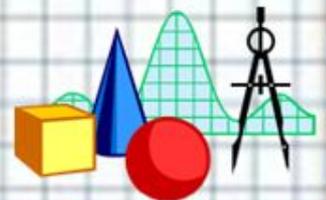




Соответственные углы равны

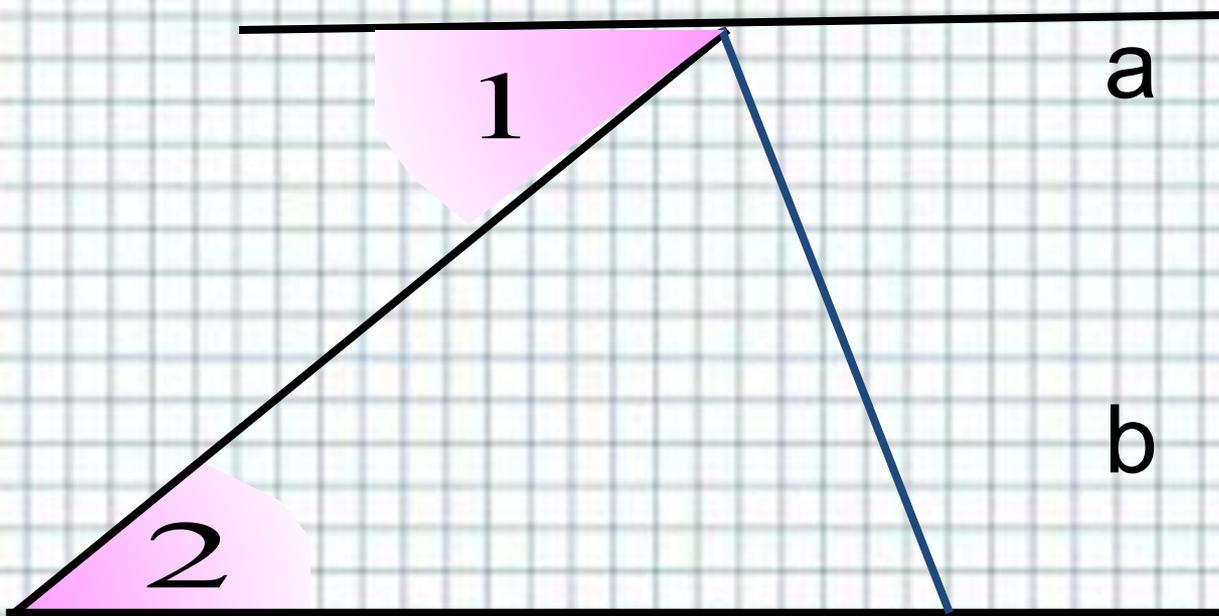


$a \parallel b$



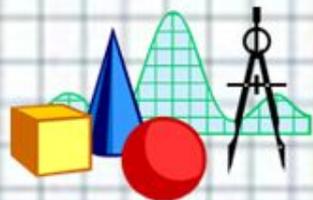


Накрест лежащие углы равны



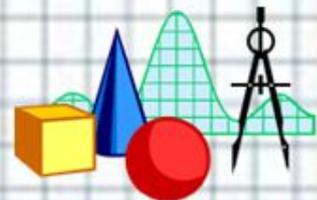
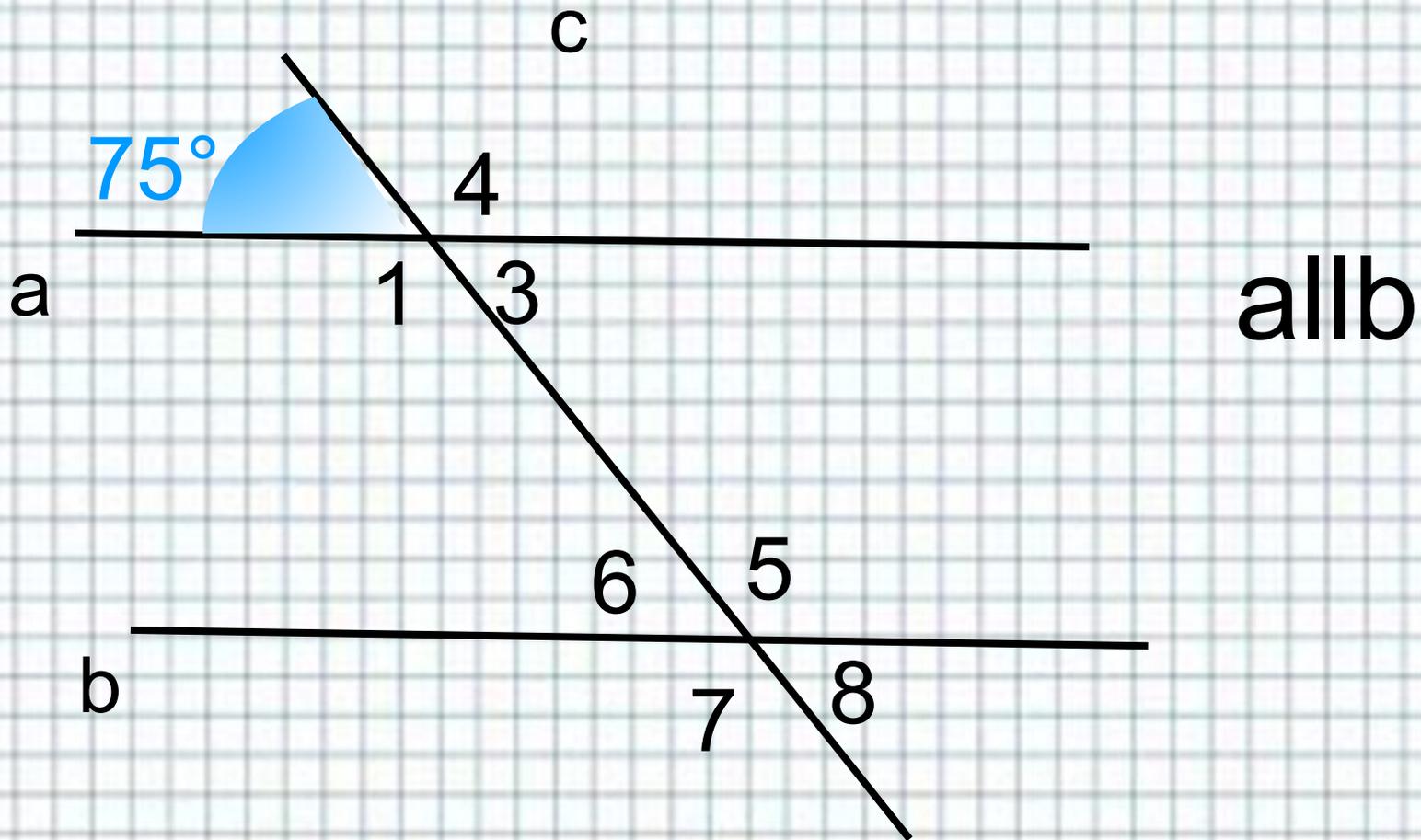
a||b

$$\angle 1 = \angle 2$$



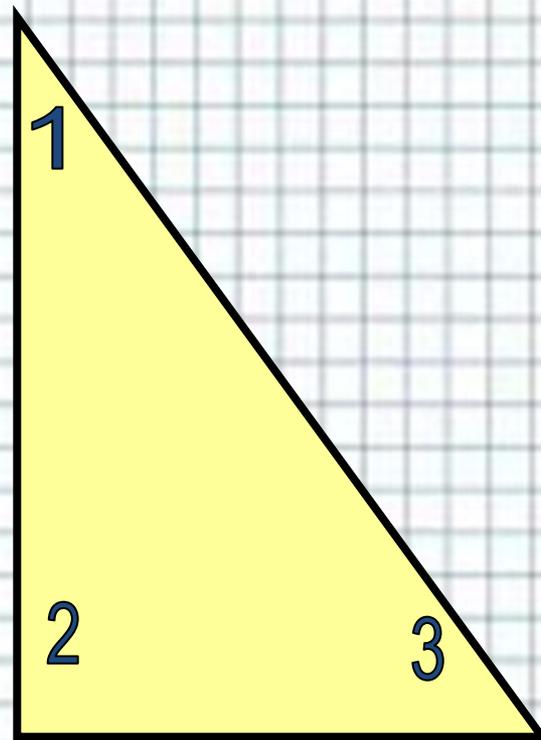
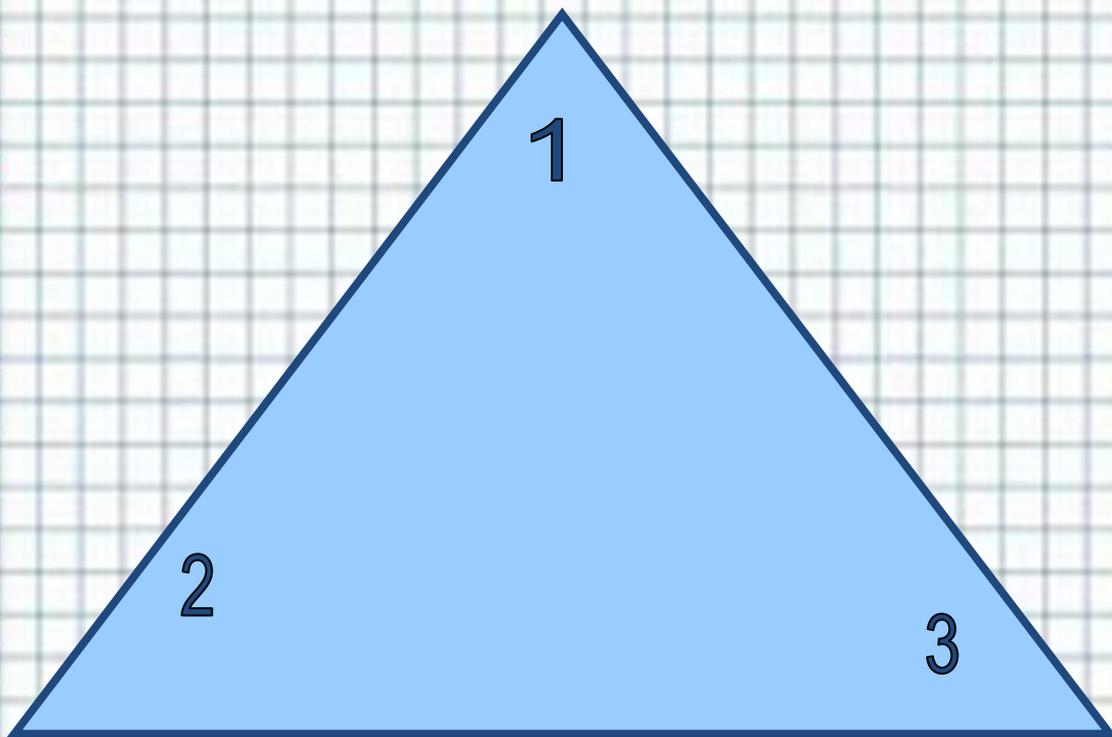


Вычислить все углы.

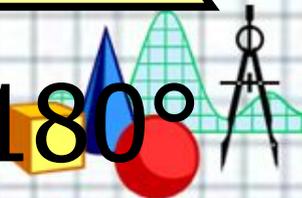




Практическая работа



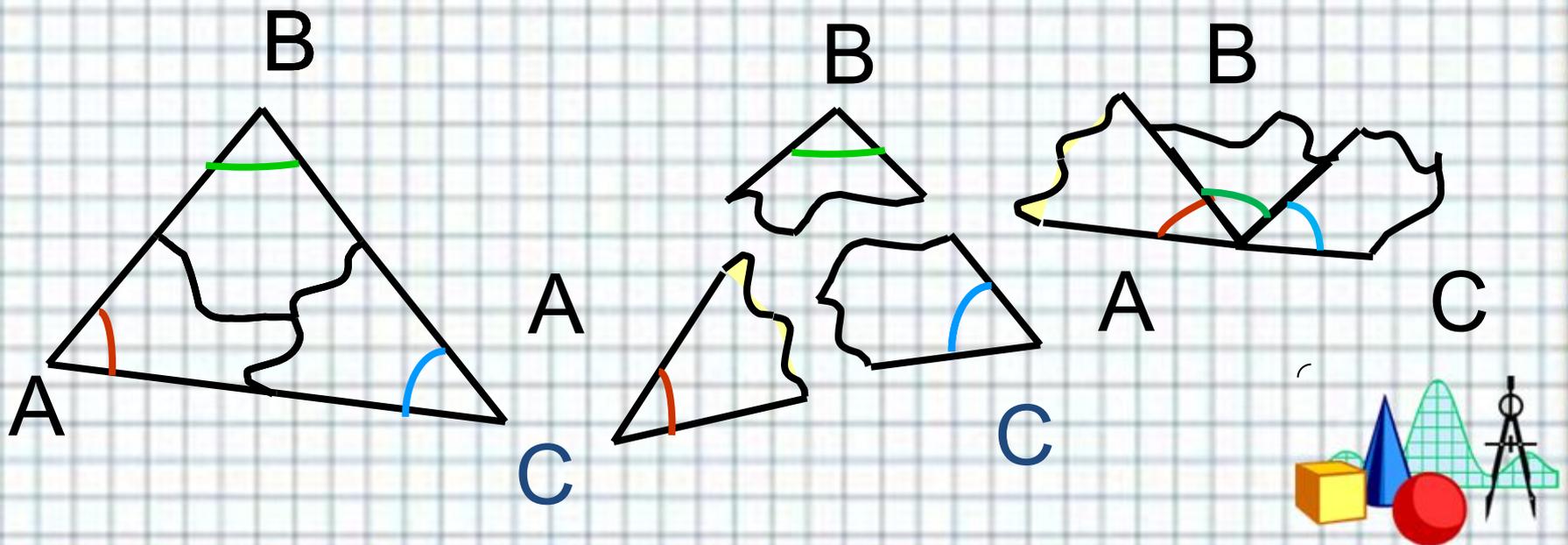
$$\angle 1 + \angle 2 + \angle 3 = \dots = 180^\circ$$





Исследование

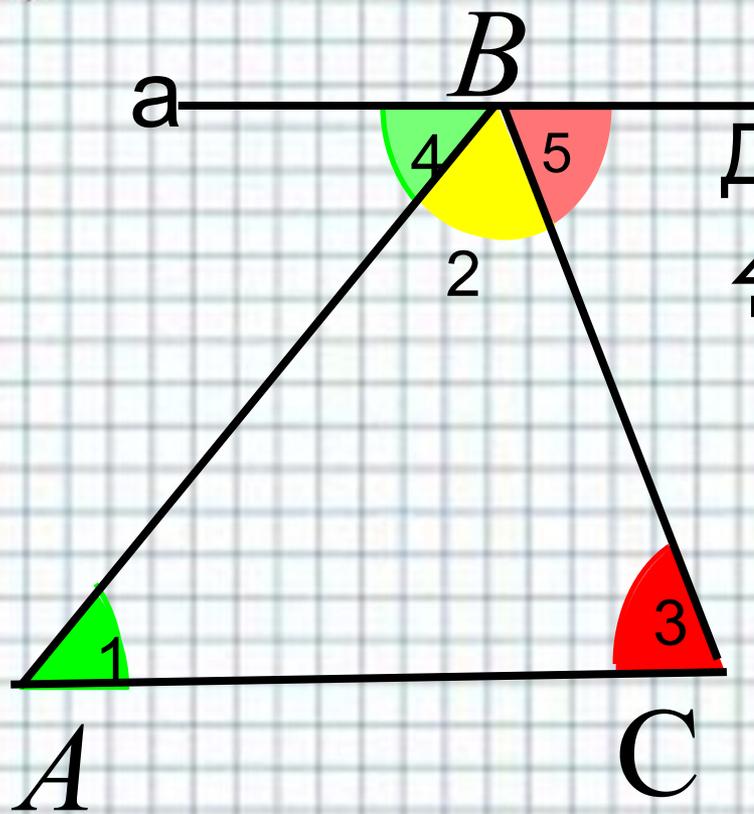
С помощью «отрывания» углов треугольника можно показать, что сумма углов треугольника равна 180° .





Теорема: Сумма углов треугольника равна 180° .

Дано: $\triangle ABC$



Доказать:

~~Доказать: $\angle A + \angle B + \angle C = 180^\circ$~~
Доказательство.

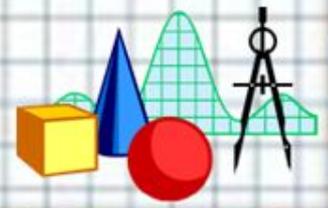
1) Проведем прямую $a \parallel AC$

2) $\angle 4 = \angle 1$ } накрест
 $\angle 5 = \angle 3$ } лежащие

3) Т.к. $\angle 4 + \angle 2 + \angle 5 = 180^\circ$,
то $\angle 1 + \angle 2 + \angle 3 = 180^\circ$

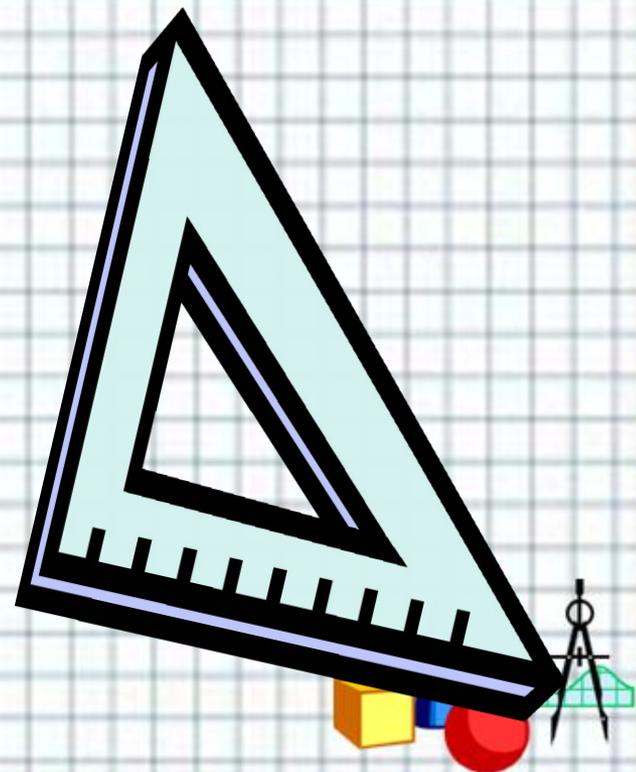
ИЛИ

$$\angle A + \angle B + \angle C = 180^\circ$$



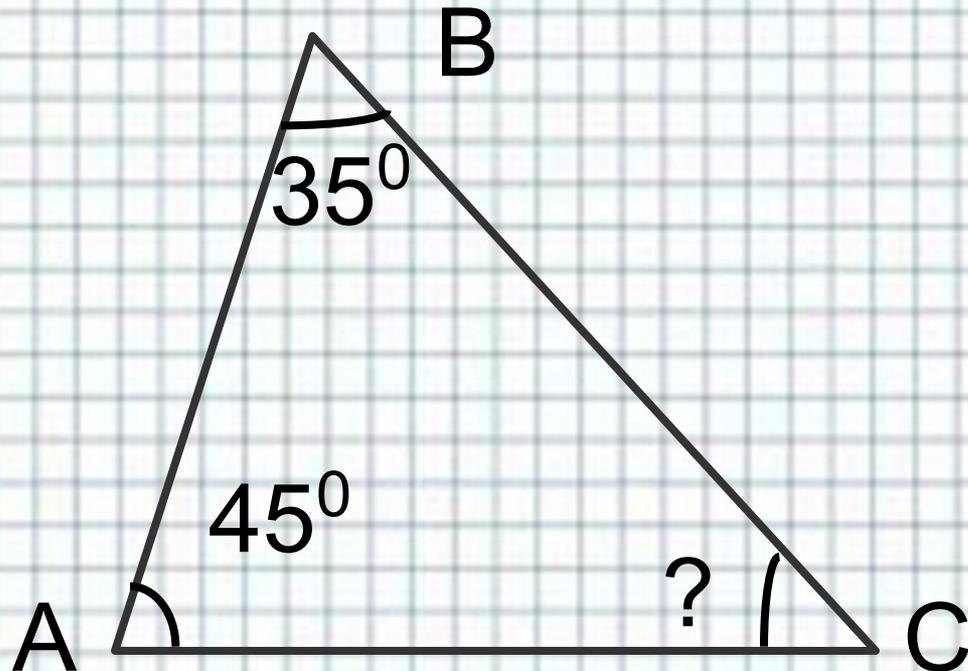


Задачи по ГОТОВЫМ чертежам

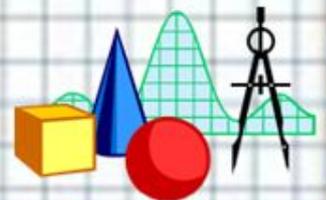




Задача № 1

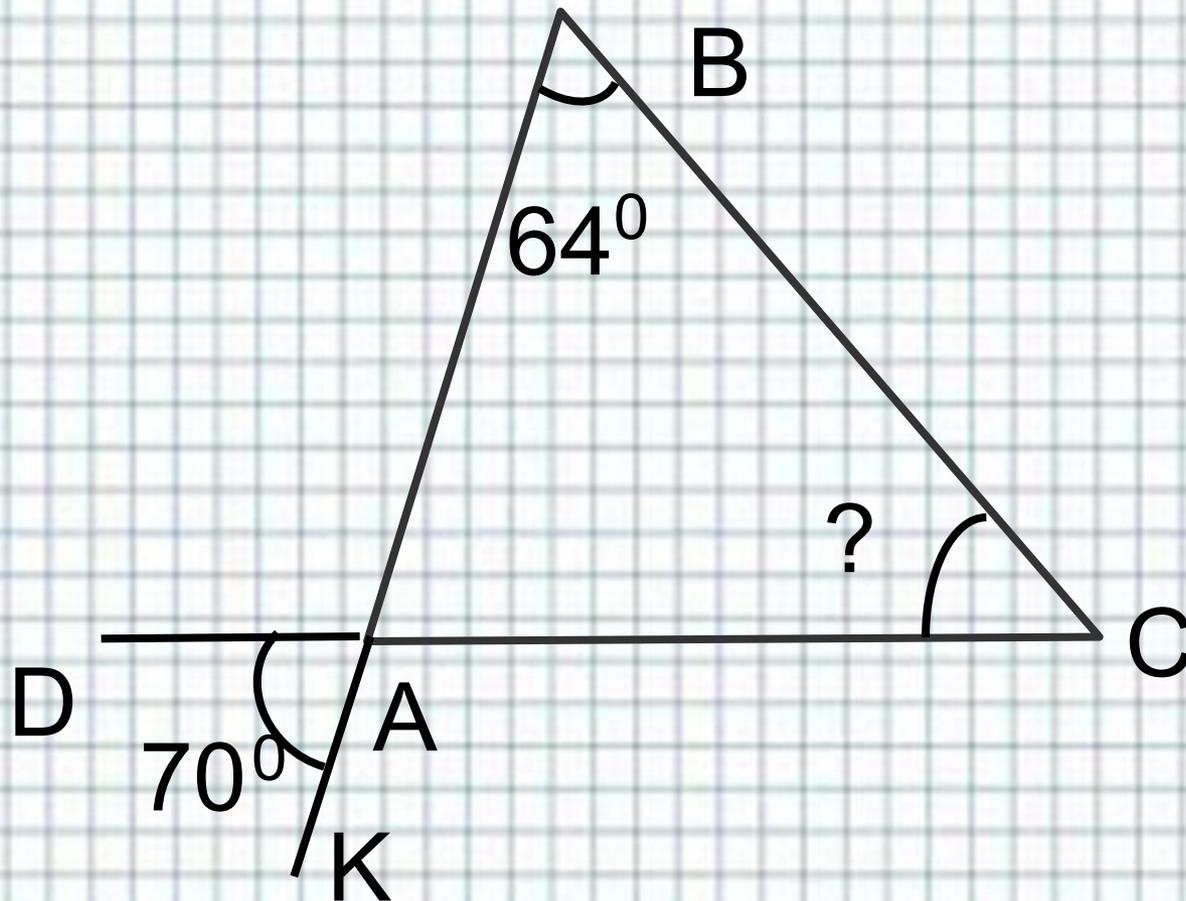


Вычислить: $\angle C$

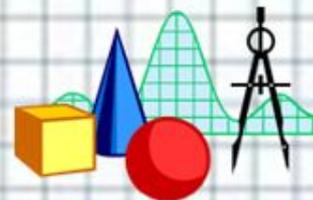




Задача № 2

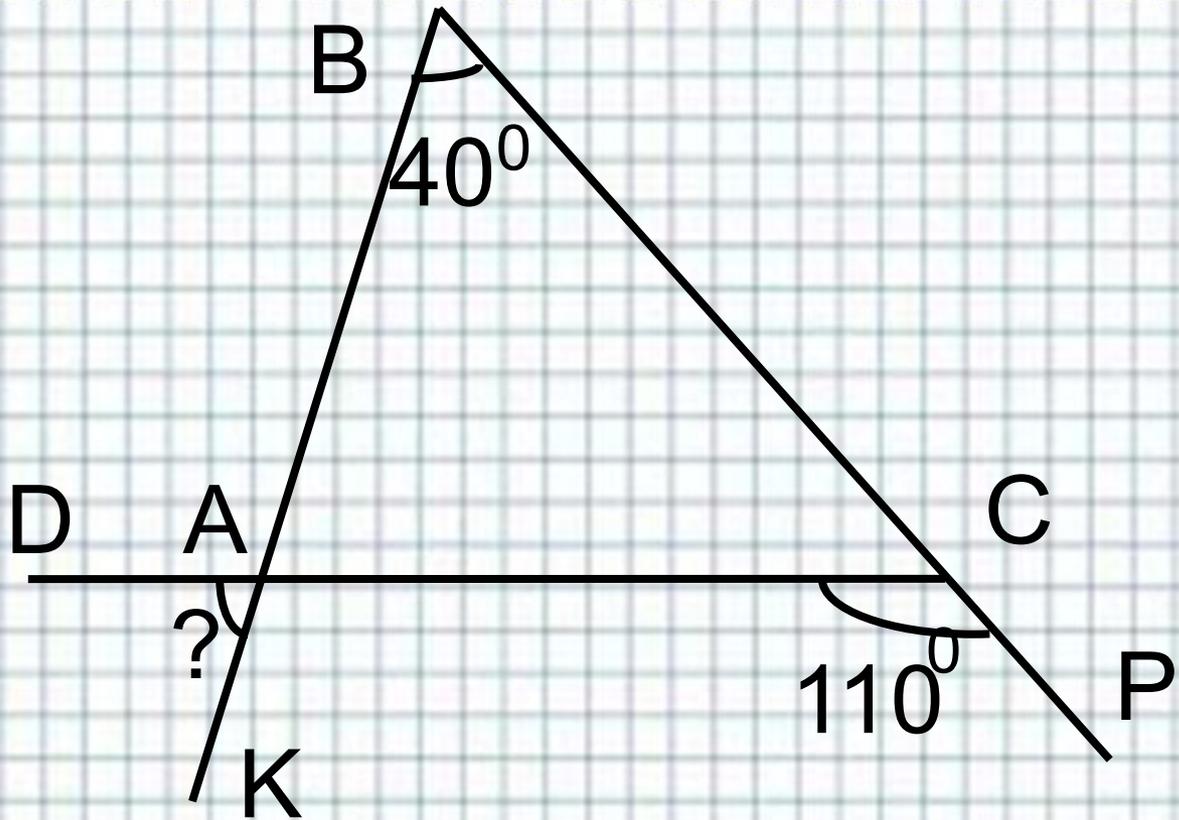


Вычислить: $\angle C$

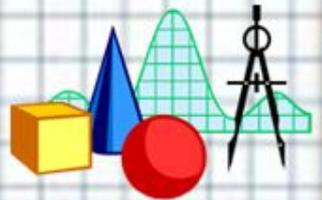




Задача №3

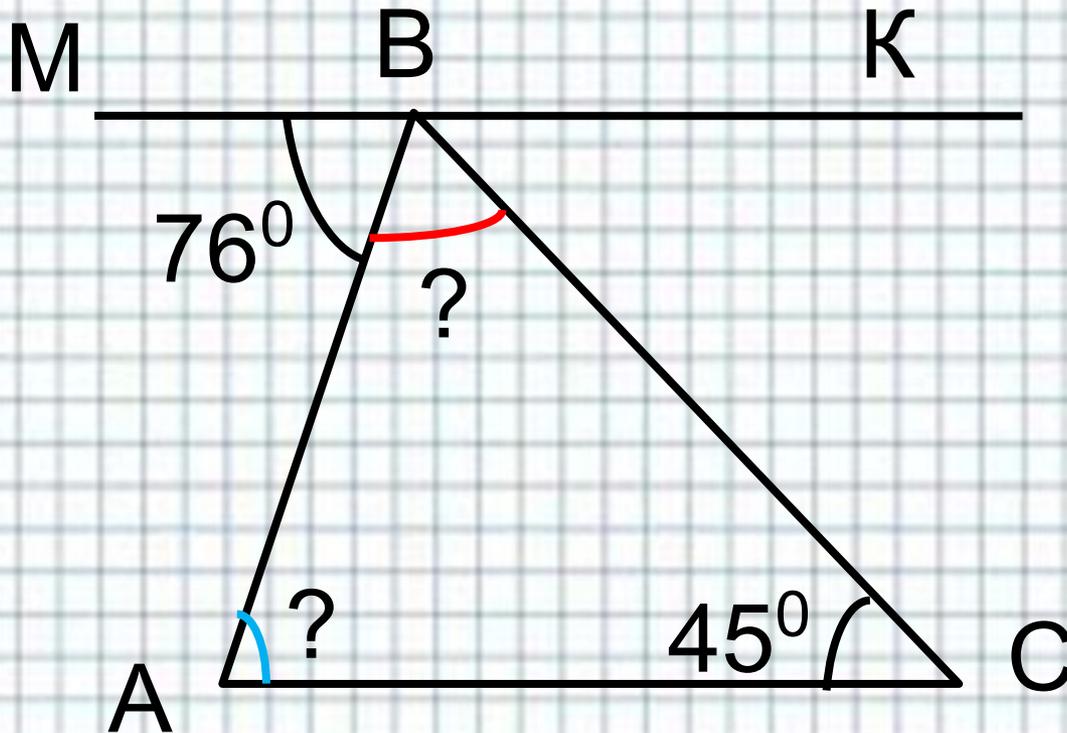


Вычислить: $\angle DAK$



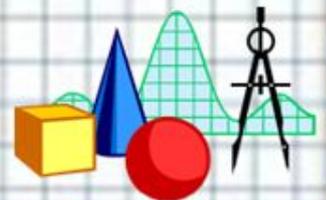


Задача № 4



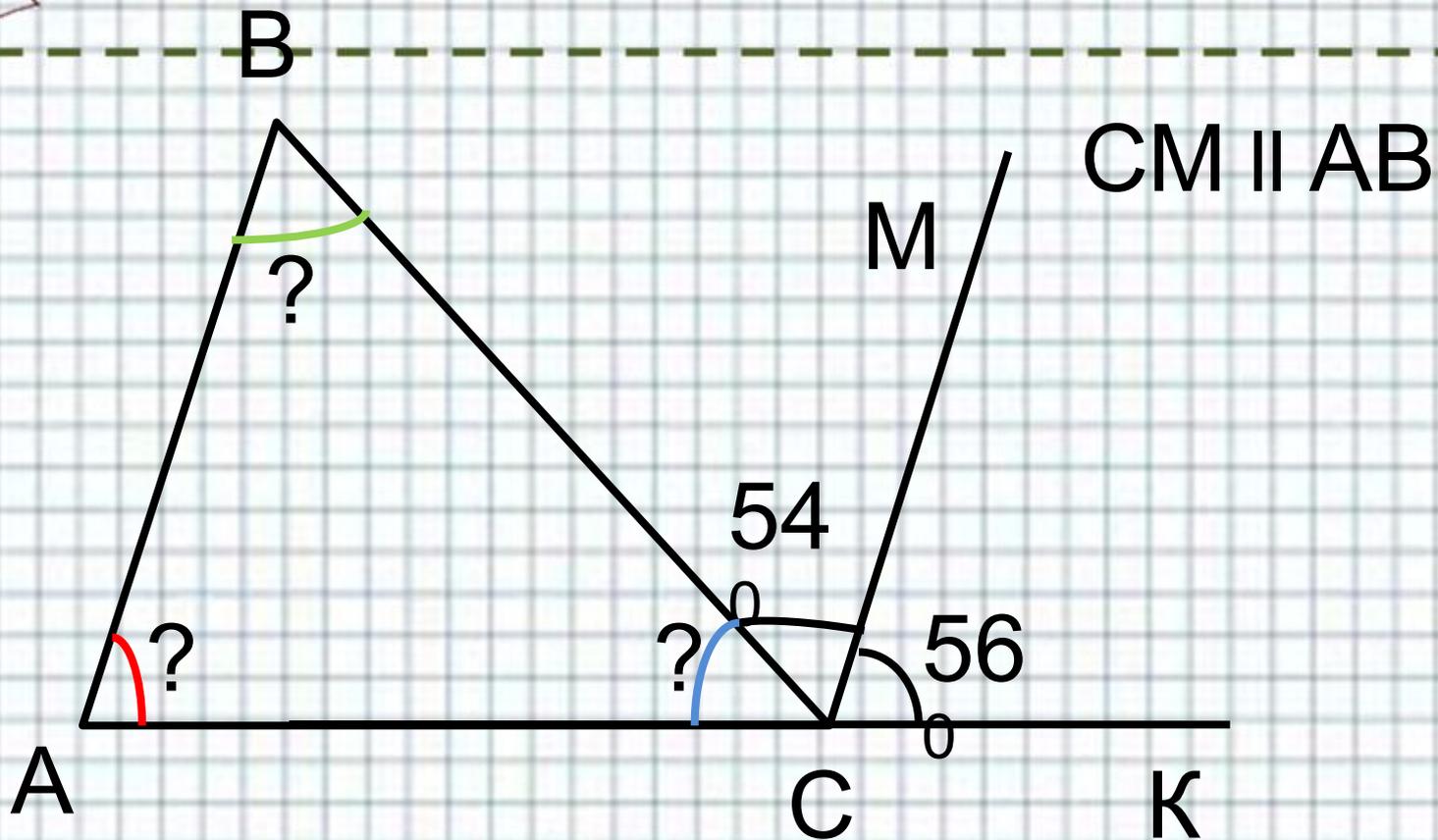
$MK \parallel AC$

Вычислить: $\angle A$; $\angle \hat{A}$

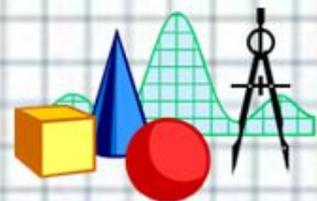




Задача № 5

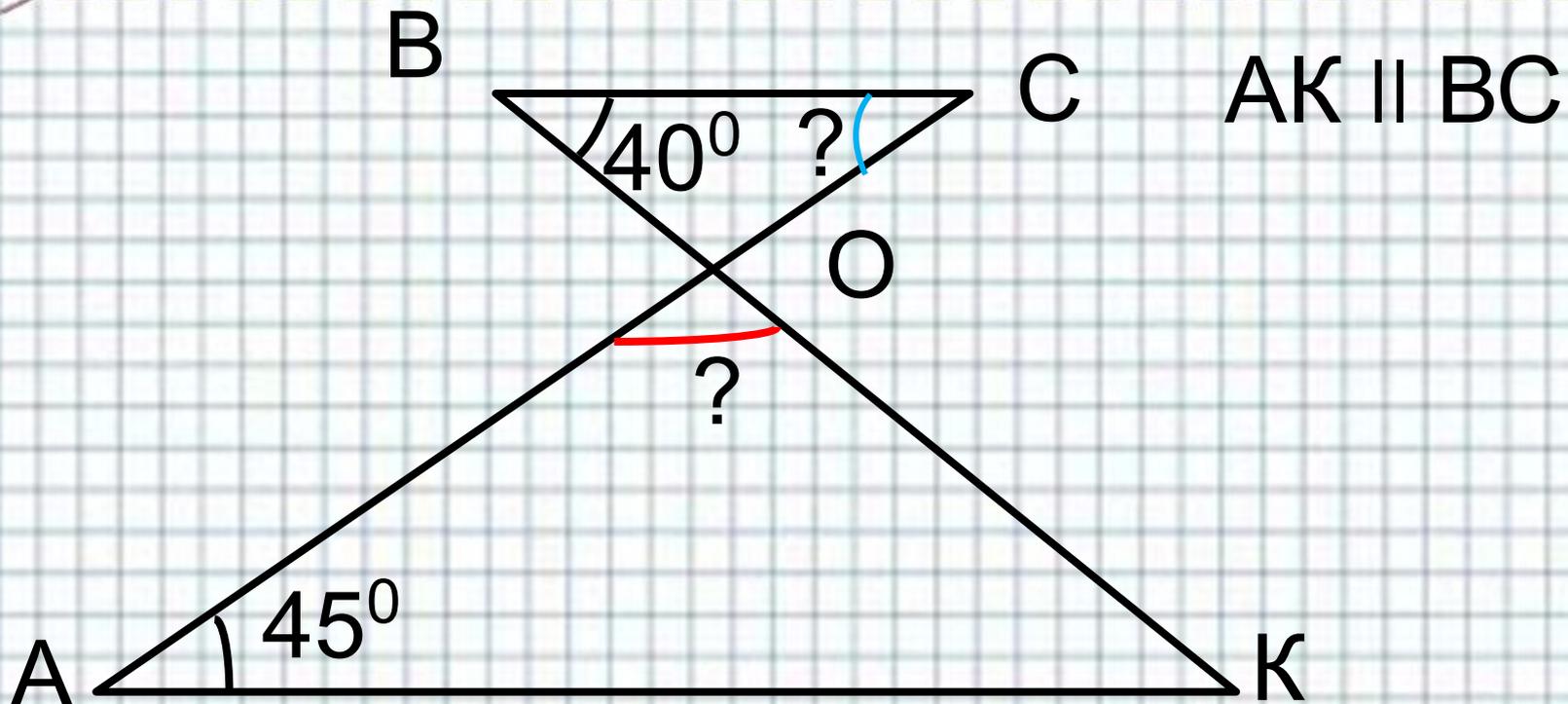


Вычислить: $\angle A$; $\angle \hat{A}$; $\angle \tilde{N}$

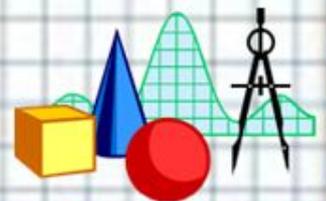




Задача № 6

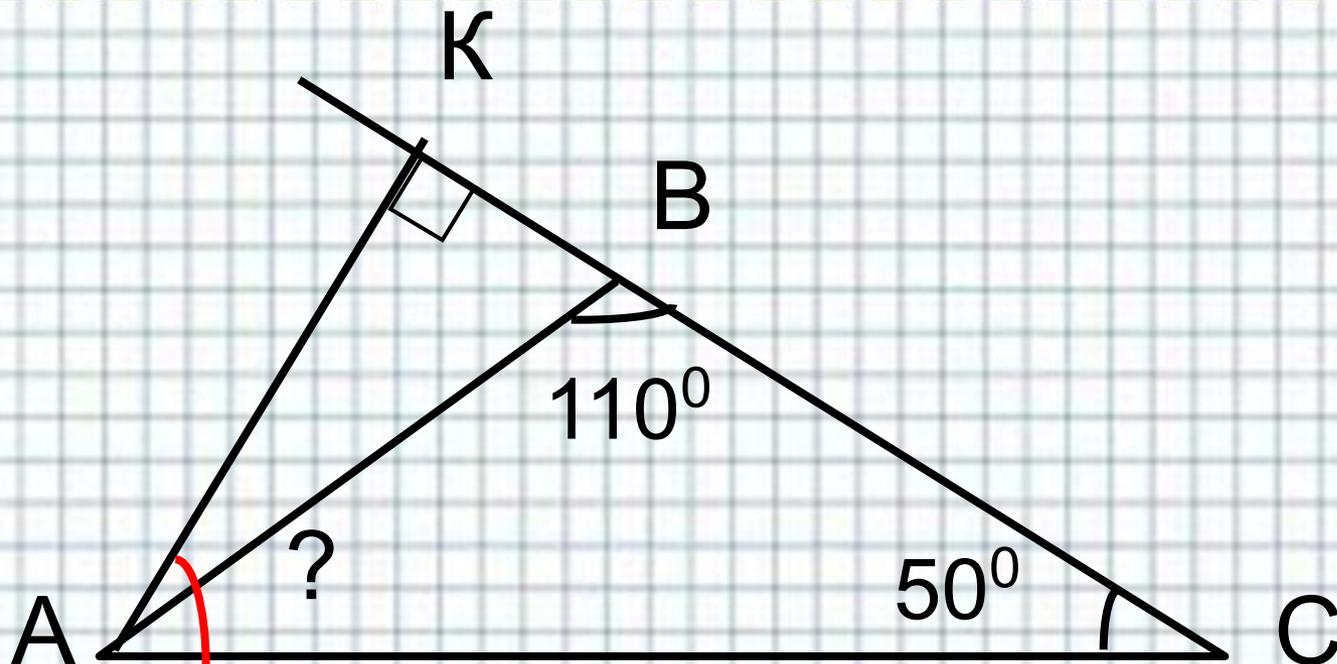


Вычислить: $\angle \tilde{N}$; $\angle \hat{A}\hat{I}\hat{E}$

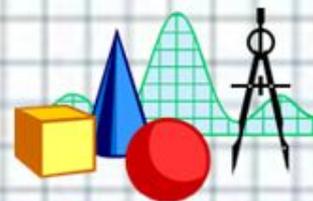




Задача №7

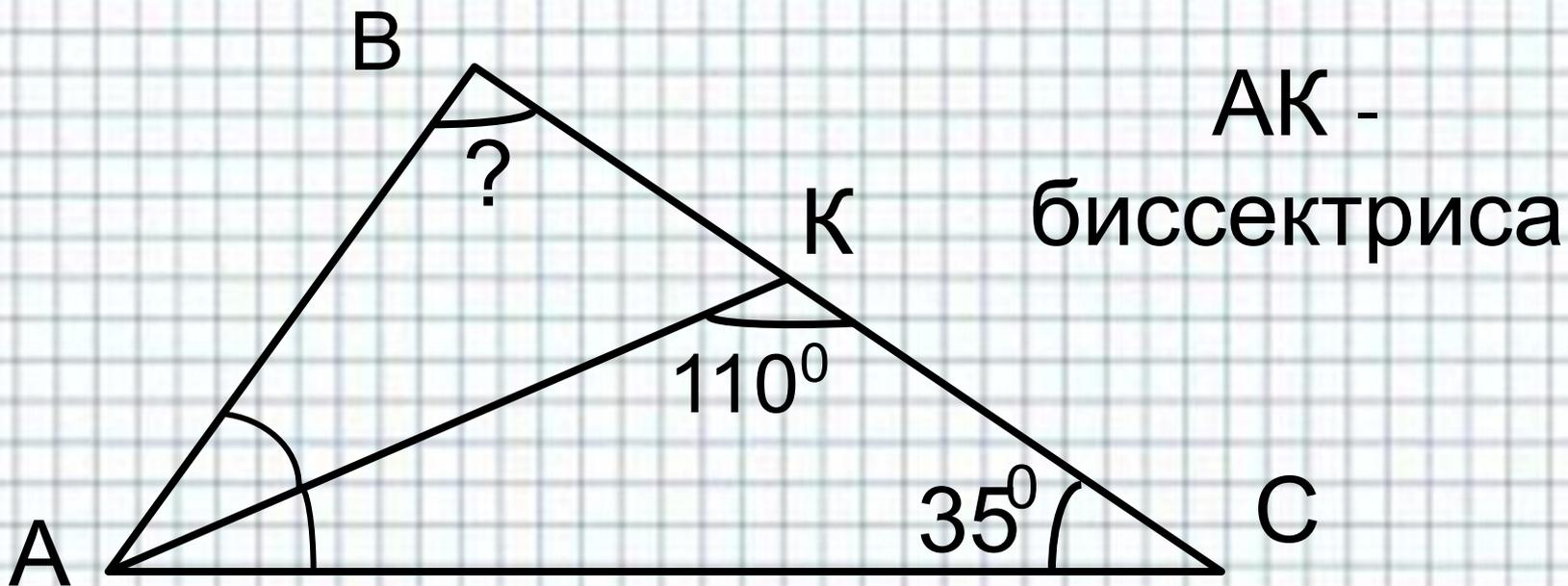


Вычислить: $\angle KAC$

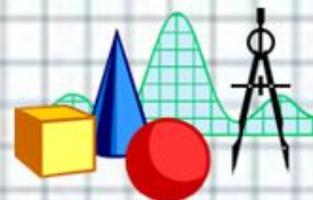




Задача № 8

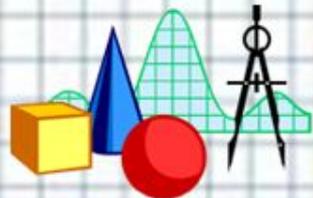


Вычислить: $\angle A\hat{A}K$



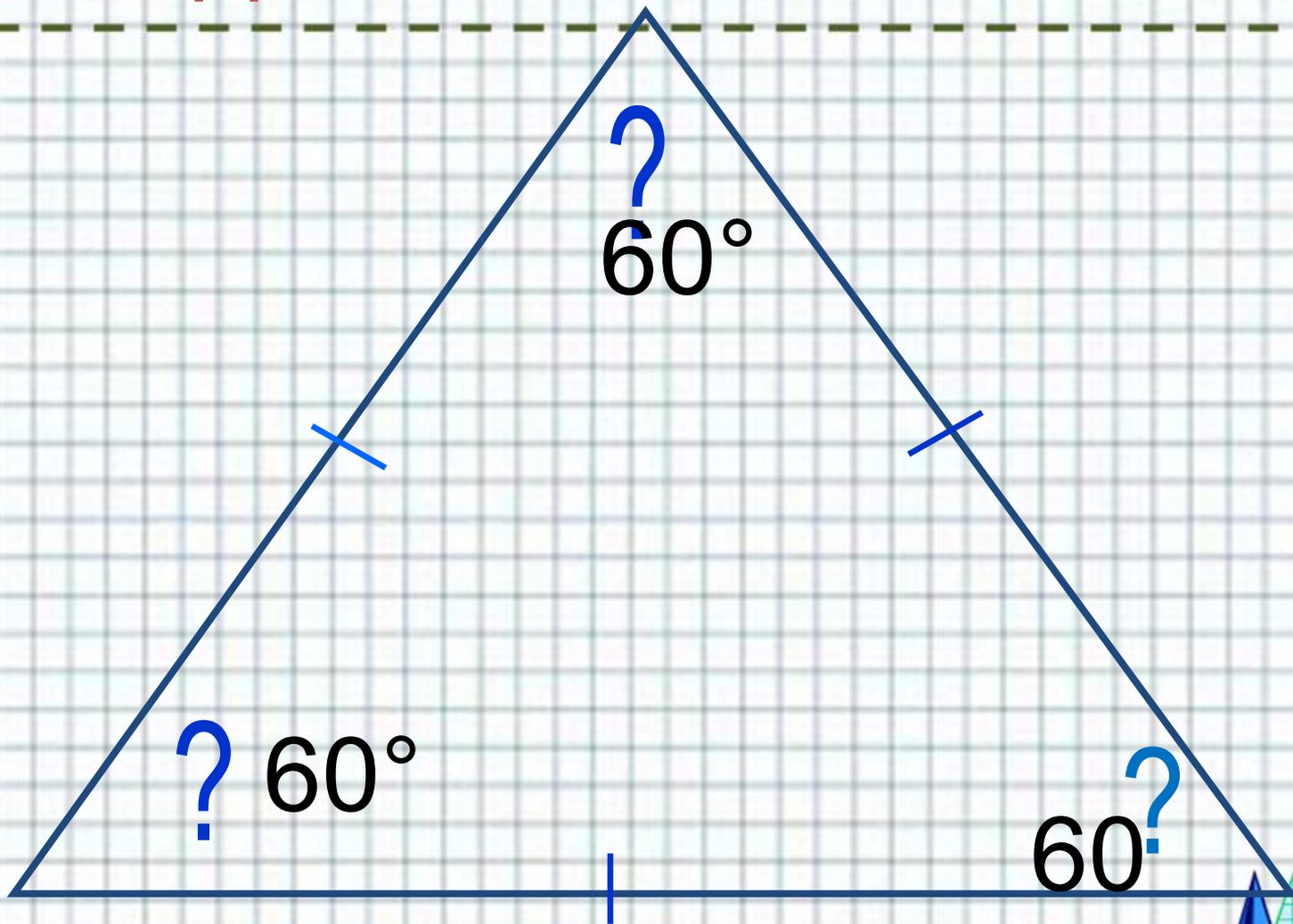


Задачи из учебника.





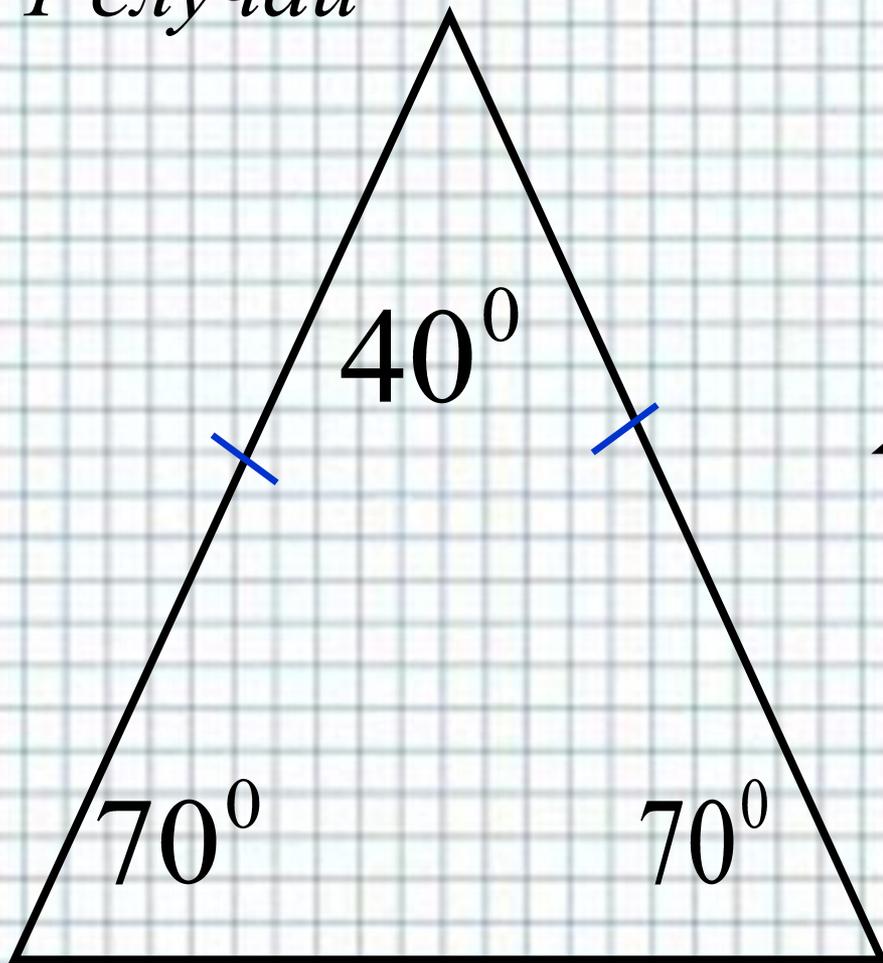
Задача №225



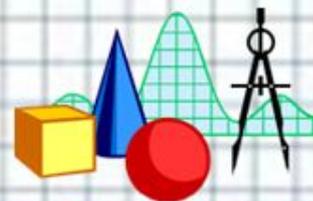
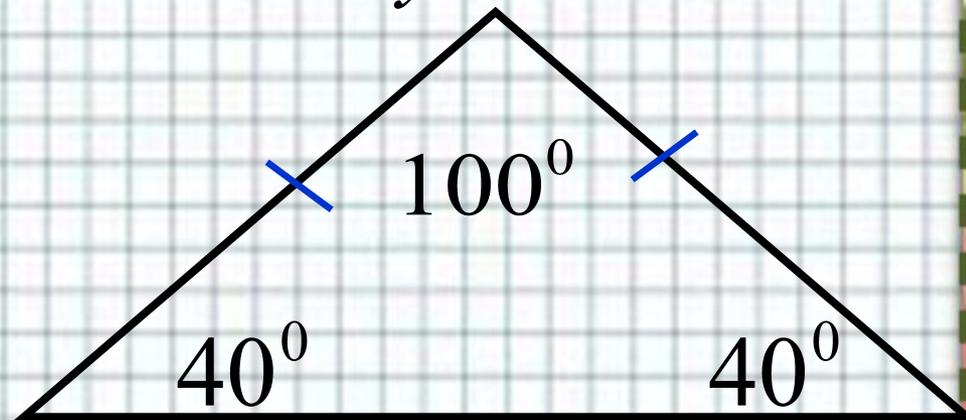


Задача №228 (а)

1 случай



2 случай





Домашнее задание

- § 30, 228(б), 227(б)

