

Решение треугольников.

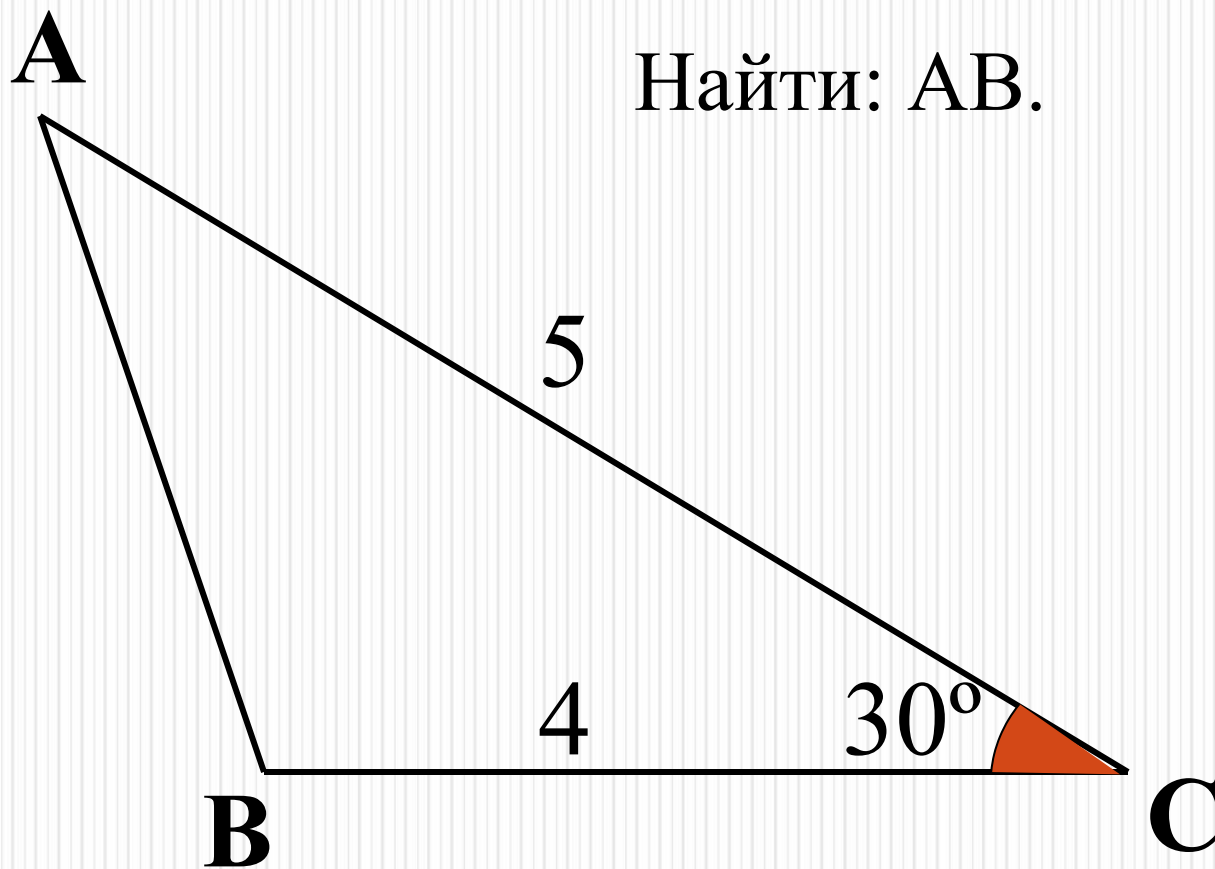
9 класс.

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Математический диктант:

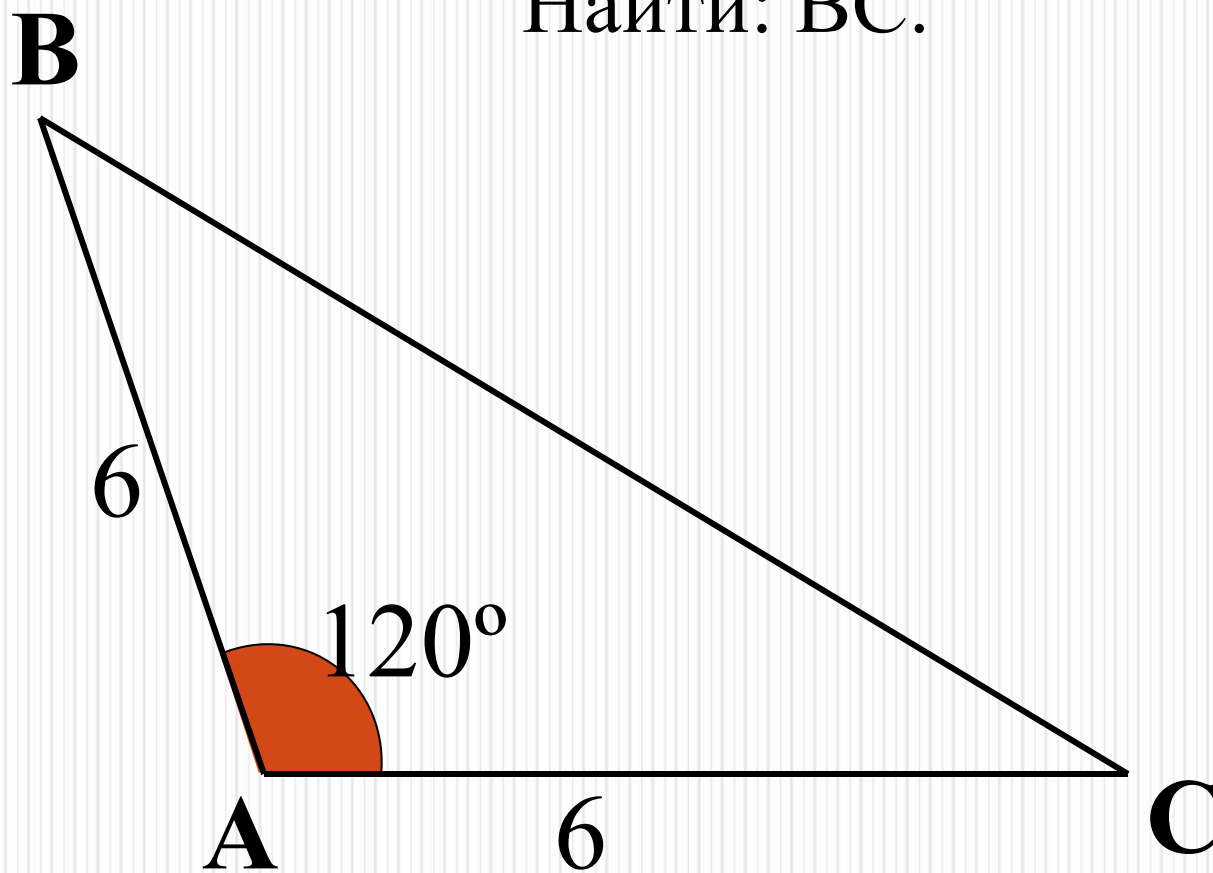
1.

Найти: АВ.



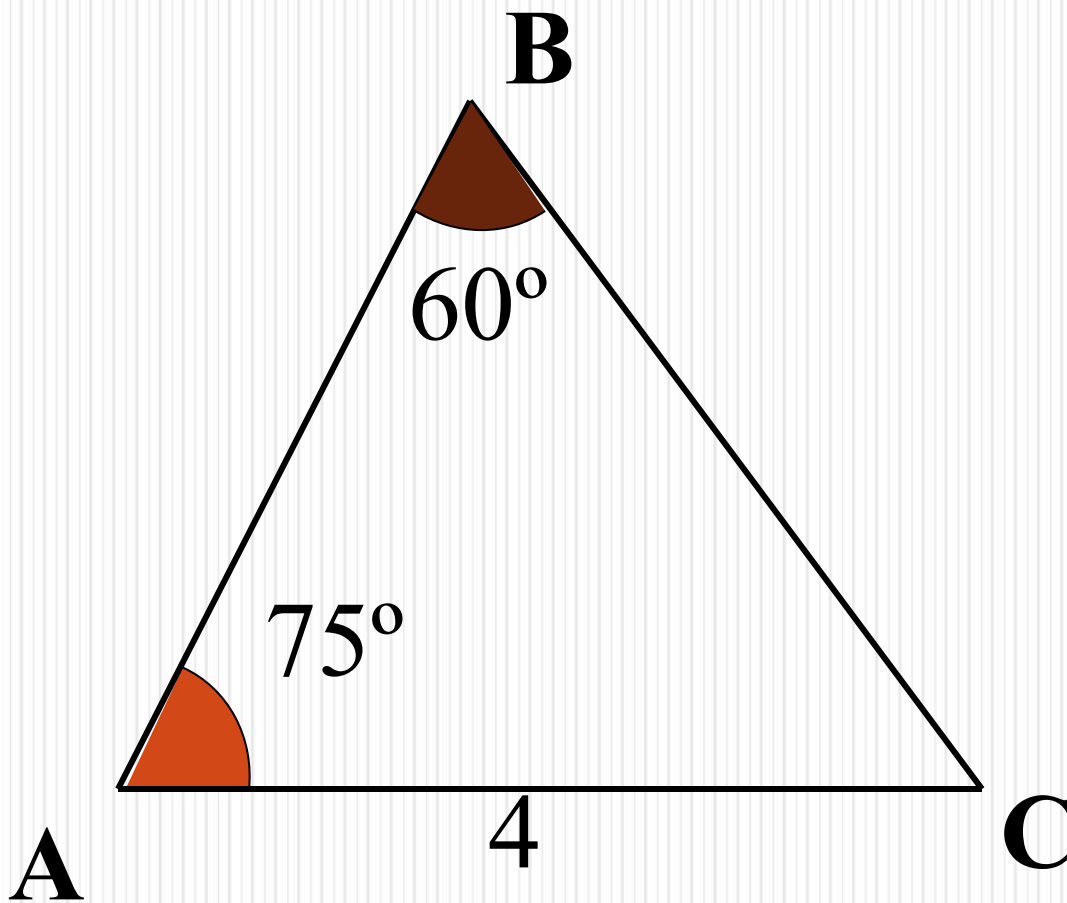
2.

Найти: BC .



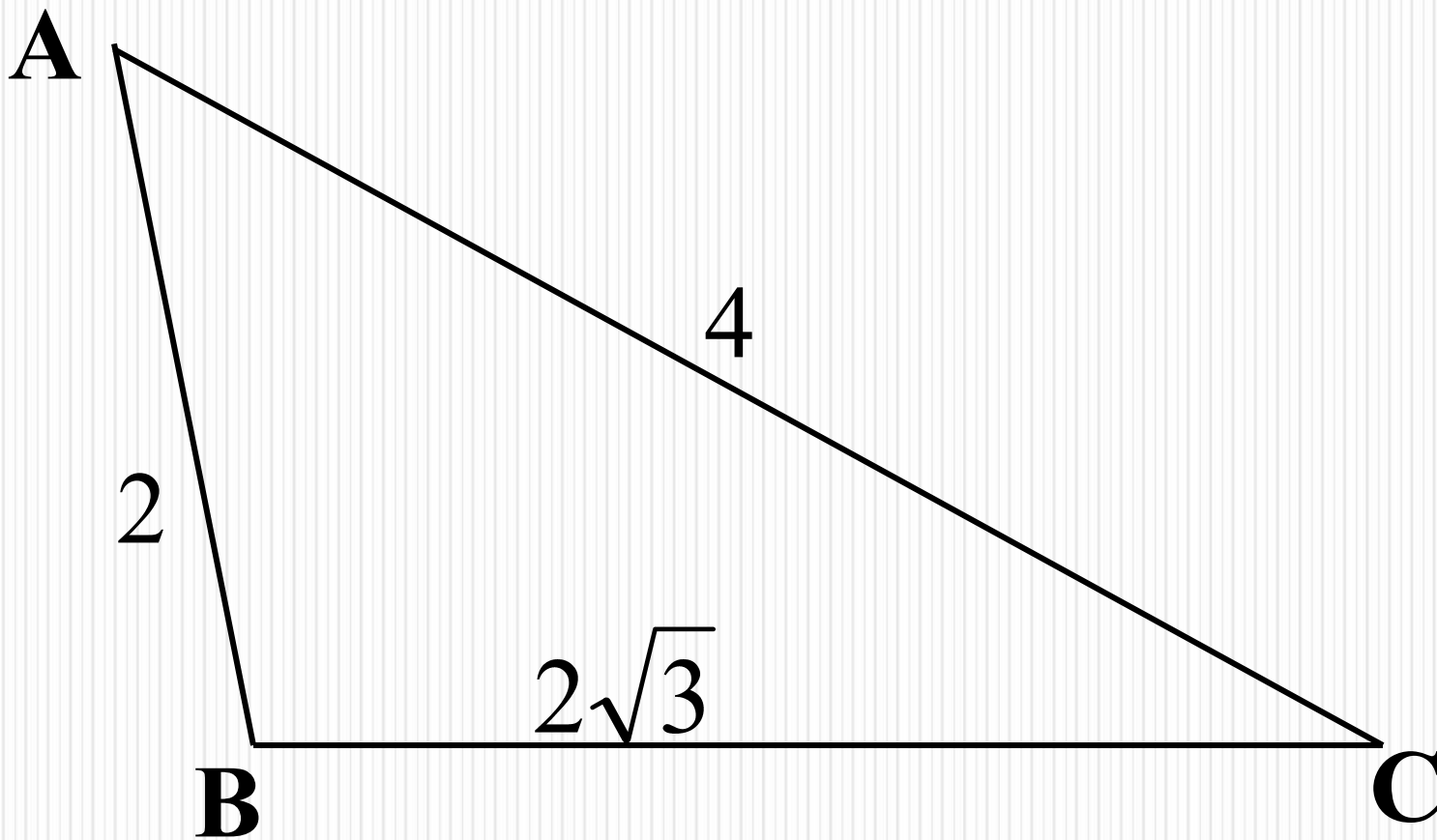
3.

Найти: АВ.



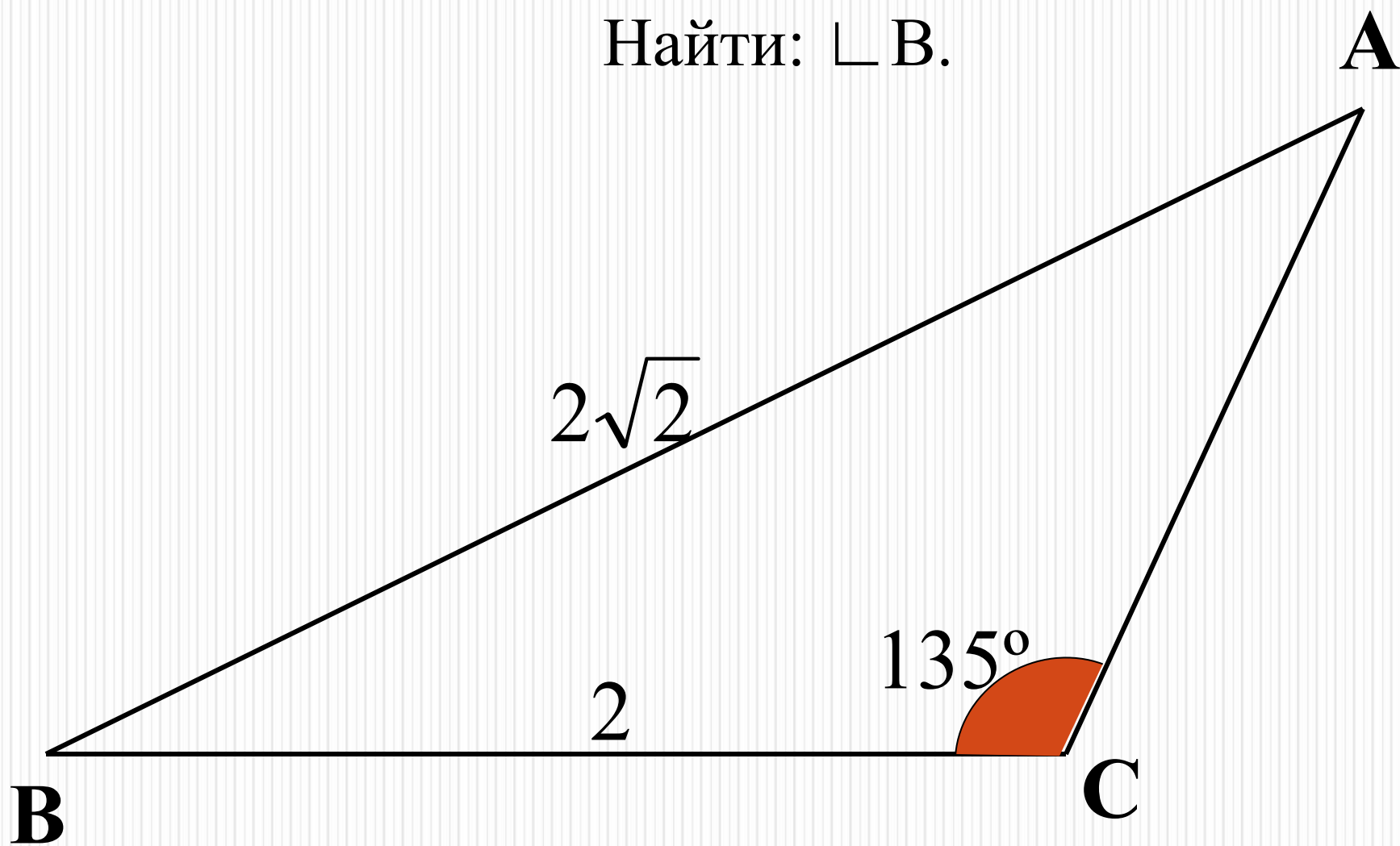
4.

Найти: $\sphericalangle A$.



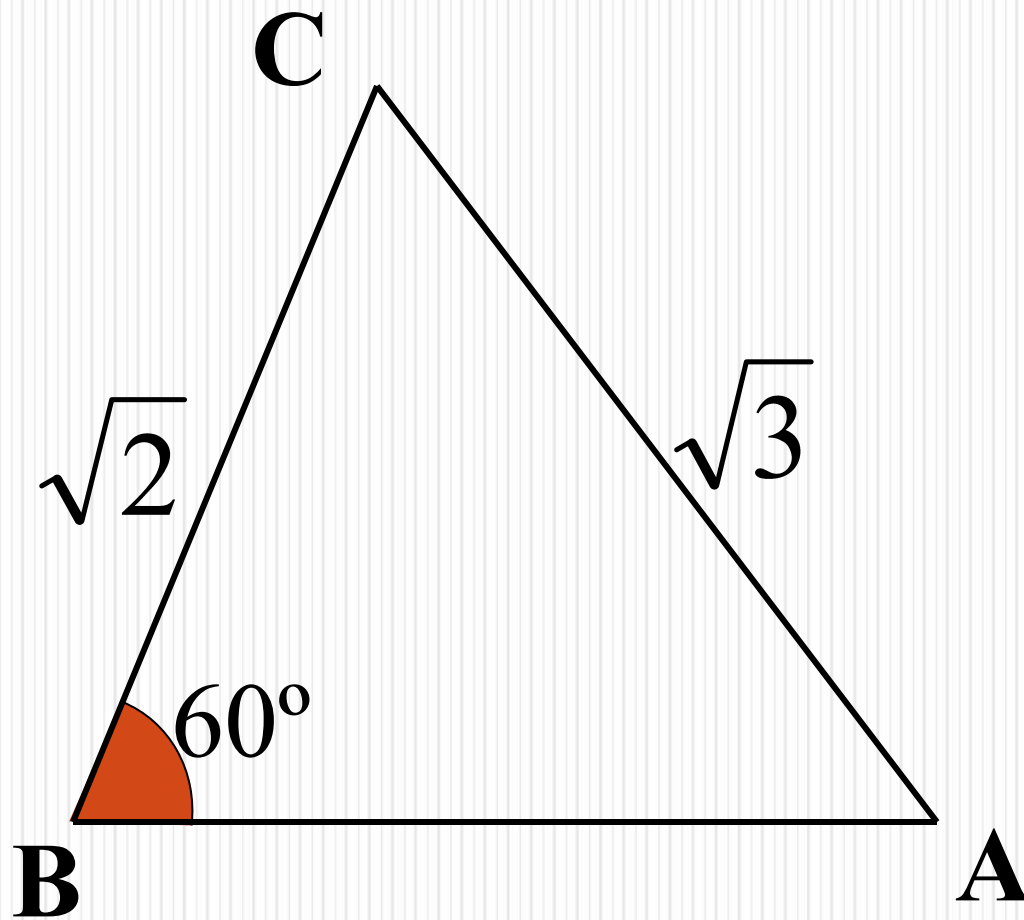
5.

Найти: $\sphericalangle B$.



6.

Найти: $\sphericalangle C$.



Ответы:

$$1. AB = \sqrt{41 - 20\sqrt{3}};$$

$$2. BC = 6\sqrt{3};$$

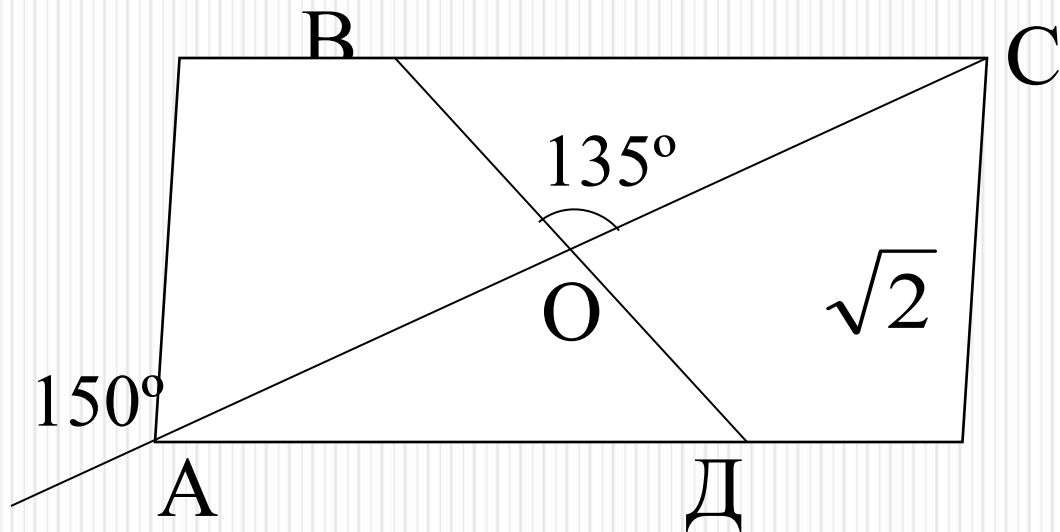
$$3. AB = \frac{4\sqrt{6}}{3};$$

$$4. \angle A = 60^\circ;$$

$$5. \angle B = 15^\circ;$$

$$6. \angle C = 75^\circ.$$

Найдите BD :



$ABCD$ -
параллелограмм

$$BO = OD = x$$

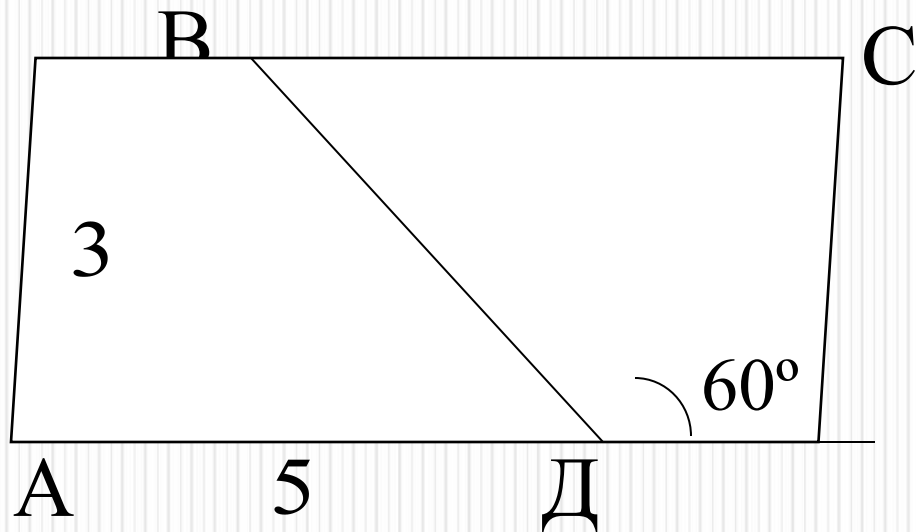
$$\angle BOD = 45^\circ$$

$$\angle OCD = 30^\circ$$

$$\frac{\sqrt{2}}{\sin 45^\circ} = \frac{x}{\sin 30^\circ}$$

$$x = 1 \quad \underline{BD = 2}$$

Найдите ВД:



ABCD -
параллелограмм

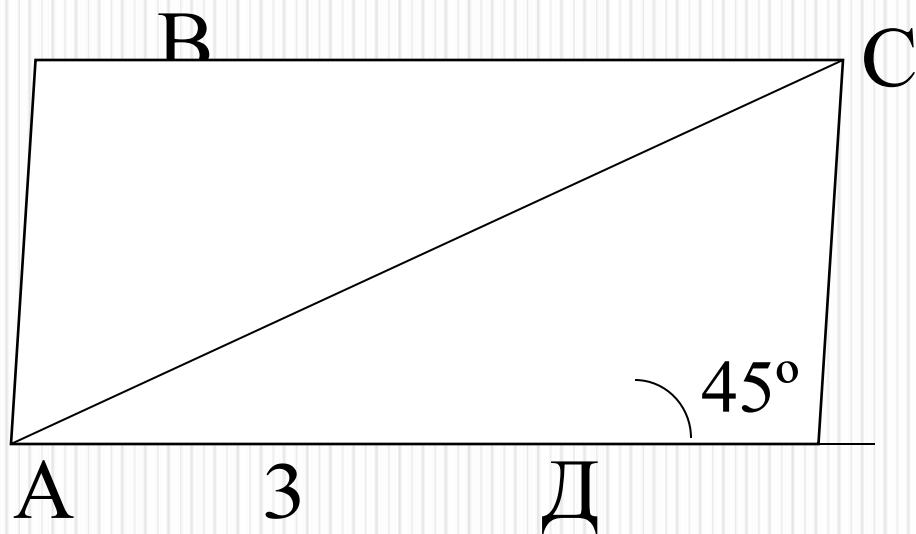
$$\angle BAD = 60^\circ$$

$$BD^2 = AB^2 + AD^2 - 2AB \cdot AD \cos A$$

$$BD^2 = 3^2 + 5^2 - 2 \cdot 3 \cdot 5 \cdot \cos 60^\circ$$

$$BD^2 = 19 \quad \underline{BD = \sqrt{19}}$$

Найдите AC:



ABCD - ромб

$$\angle ADC = 135^\circ$$

$$AC^2 = AD^2 + CD^2 - 2AD \cdot CD \cos D$$

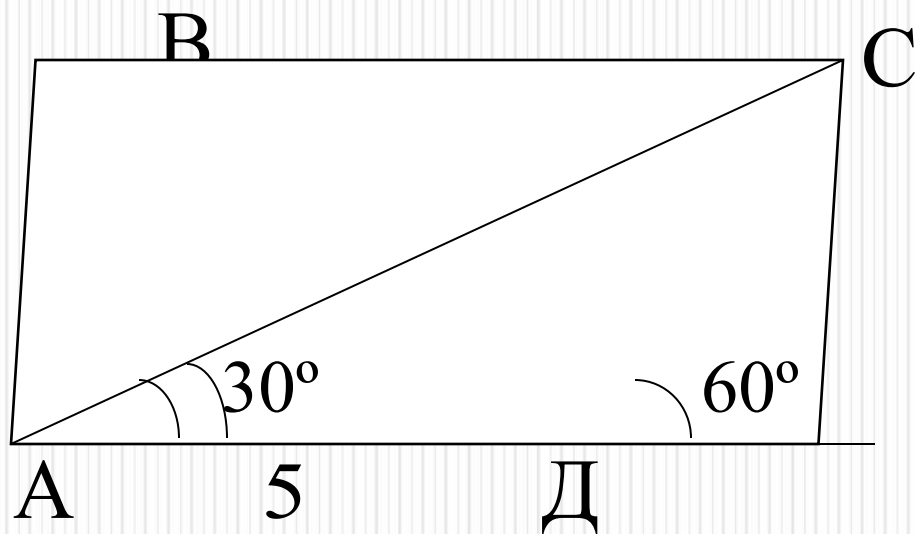
$$AC^2 = 3^2 + 3^2 - 2 \cdot 3 \cdot 3 \cdot \cos 135^\circ$$

$$AC^2 = 9 + 9 - 18 \cos 135^\circ$$

$$AC^2 = 9(2 + \sqrt{2})$$

$$\underline{AC = 3\sqrt{2 + \sqrt{2}}}$$

Найдите AC:



ABCD -
параллелограмм

$$\angle ADC = 120^\circ$$

$$\angle ACD = 30^\circ$$

$$\frac{x}{\sin 120^\circ} = \frac{5}{\sin 30^\circ}$$

$$\underline{AC = 5\sqrt{3}}$$