

Зајучнска Наслава:

1. У правоуглом троуглу хипотенуза је 15 cm, а једна катета 12 cm. Израчунај обим и површину овог троугла.

$$c = 15 \text{ cm}$$

$$b = 12 \text{ cm}$$

$$a = ? \quad P = ? \quad O = ?$$

$$c^2 = a^2 + b^2$$

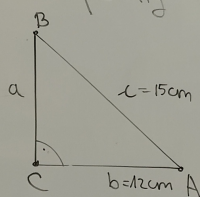
$$a^2 = c^2 - b^2$$

$$a^2 = 15^2 - 12^2$$

$$a^2 = 225 - 144 = 81$$

$$a = \sqrt{81}$$

$$a = 9 \text{ cm}$$



$$O = a + b + c$$

$$O = 9 + 12 + 15$$

$$O = 36 \text{ cm}$$

$$P = \frac{a \cdot b}{2} = \frac{9 \cdot 12}{2}$$

$$P = 54 \text{ cm}^2$$

2. Да ли су дужине страница троугла. Утврди да ли је троугао правоугли:
7, 15, 17 - странице Δ

$$17^2 = 7^2 + 15^2 ?$$

$$289 = 49 + 225 ?$$

$$289 = 274 \quad \text{X}$$

Троугао није правоугли.

3. (276. збирка)

$$a) \quad O = 54 \text{ cm}$$

$$a = b + 2 \text{ cm}$$

$$d = ?$$

$$2 \cdot a + 2 \cdot b = 54$$

$$2 \cdot (b + 2) + 2b = 54$$

$$2b + 4 + 2b = 54$$

$$4b + 4 = 54$$

$$\rightarrow 4b = 54 - 4$$

$$4b = 50$$

$$b = 50 : 4$$

$$b = 12,5 \text{ cm} = \frac{25}{2} \text{ cm}$$

$$a = 14,5 \text{ cm} = \frac{29}{2} \text{ cm}$$

$$d^2 = a^2 + b^2$$

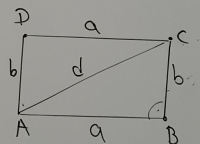
$$d^2 = \left(\frac{29}{2}\right)^2 + \left(\frac{25}{2}\right)^2$$

$$\rightarrow d^2 = \frac{841}{4} + \frac{625}{4}$$

$$d^2 = \frac{1466}{4}$$

$$d = \sqrt{\frac{1466}{4}}$$

$$d = \frac{\sqrt{1466}}{2} \text{ cm}$$



Діюжна Насміва:

4. (287. Збирка)

$$a_k = 16 \text{ cm}$$

$$P_p = P_k - 16 \text{ cm}^2$$

$$b_p = 10 \text{ cm}$$

$$d_p = ?$$

$$P_k = a_k^2 = 16 \cdot 16$$

$$P_k = 256 \text{ cm}^2$$

$$P_p = P_k - 16 \text{ cm}^2 = 256 \text{ cm}^2 - 16 \text{ cm}^2$$

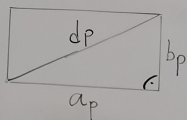
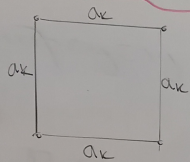
$$P_p = 240 \text{ cm}^2$$

$$a_p \cdot b_p = P_p$$

$$a_p \cdot 10 = 240$$

$$a_p = 240 : 10$$

$$a_p = 24 \text{ cm}$$



$$d_p^2 = a_p^2 + b_p^2$$

$$d_p^2 = 24^2 + 10^2$$

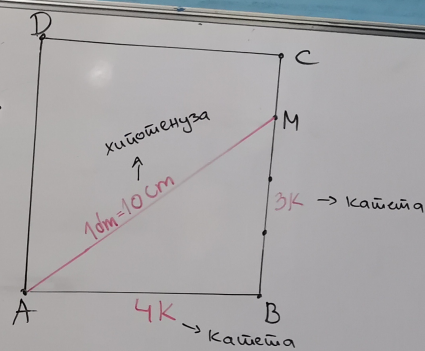
$$d_p^2 = 576 + 100$$

$$d_p^2 = 676$$

$$d_p = \sqrt{676}$$

$$d_p = 26 \text{ cm}$$

5.



$$BM:MC = 3:1$$

$$AM = 1 \text{ dm}$$

$$BM = 3K, MC = K$$

$$P = ?$$

$$(3K)^2 + (4K)^2 = 10^2$$

$$9K^2 + 16K^2 = 100$$

$$25K^2 = 100$$

$$K^2 = 100 : 25$$

$$K^2 = 4$$

$$K = \sqrt{4}$$

$$K = 2 \text{ cm}$$

$$a = 4K = 4 \cdot 2 \text{ cm}$$

$$a = 8 \text{ cm}$$

$$P = a^2$$

$$P = 8^2$$

$$P = 64 \text{ cm}^2$$

Долученска Настава:

6. (301. Збирка)

$$P = 9\sqrt{3} \text{ cm}^2$$

$$O = ? \quad h = ?$$

$$\frac{a^2\sqrt{3}}{4} = P$$

$$\frac{a^2\sqrt{3}}{4} = 9\sqrt{3}$$

$$a^2\sqrt{3} = 4 \cdot 9\sqrt{3}$$

$$a^2\sqrt{3} = 36\sqrt{3}$$

$$a^2 = 36$$

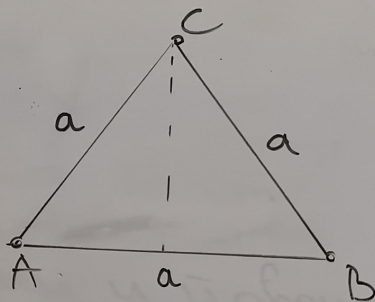
$$a = \sqrt{36}$$

$$a = 6 \text{ cm}$$

$$h = \frac{a\sqrt{3}}{2} = \frac{6\sqrt{3}}{2}$$

$$h = 3\sqrt{3} \text{ cm}$$

$$O = 3 \cdot a = 3 \cdot 6 \text{ cm} = 18 \text{ cm}$$



$$h = \frac{a\sqrt{3}}{2}$$

$$P = \frac{a \cdot h}{2}$$

$$P = \frac{a}{1} \cdot \frac{a\sqrt{3}}{2}$$

$$P = \frac{a^2\sqrt{3}}{2} \cdot \frac{2}{1}$$

$$P = \frac{a^2\sqrt{3}}{4}$$