

8. x

7. teden

vaja dela mojstra, če mojster dela vajo

5508 sta. 170, 171 | 1ac, 2ac, 3a, 5, 7, 8, 10ab, 15\*

① a) krog  
 $r = 45 \text{ mm}$   
 $\pi = ?$

$$\begin{aligned} \pi &= \tilde{\pi} r^2 \\ \pi &= 3,14 \cdot 45^2 \\ \pi &= 3,14 \cdot 2025 \\ \pi &= \underline{\underline{6358,5 \text{ mm}^2}} \end{aligned}$$

c.) krog  
 $r = 1\frac{2}{5} \text{ cm} = \frac{7}{5} \text{ cm}$   
 $\pi = ?$

$$\begin{aligned} \pi &= \tilde{\pi} r^2 \\ \pi &= \frac{22 \cdot 7 \cdot 7 \cdot 1}{7 \cdot 5 \cdot 5 \cdot 1} \\ \pi &= \frac{154}{25} \text{ cm}^2 \\ \pi &= \underline{\underline{6\frac{4}{25} \text{ cm}^2}} \end{aligned}$$

② a.) krog  
 $2r = 125 \text{ cm}$   
 $\pi = ?$

$$\begin{aligned} r &= 125 : 2 \\ r &= 62,5 \text{ cm} \end{aligned}$$

$$\begin{aligned} \pi &= \tilde{\pi} r^2 \\ \pi &= 3,14 \cdot 62,5^2 \\ \pi &= \underline{\underline{12509,375 \text{ cm}^2}} \end{aligned}$$

c.) krog  
 $2r = 3\frac{2}{11} \text{ m} = \frac{35}{11} \text{ m}$   
 $\pi = ?$

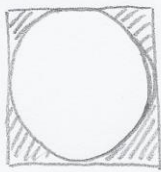
$$\begin{aligned} r &= \frac{35}{11} : 2 \\ r &= \frac{35 \cdot 1}{11 \cdot 2} \\ r &= \frac{35}{22} \text{ m} \end{aligned}$$

$$\begin{aligned} \pi &= \tilde{\pi} r^2 \\ \pi &= \frac{22 \cdot 35 \cdot 35 \cdot 5}{7 \cdot 22 \cdot 22 \cdot 1} \\ \pi &= \frac{175}{22} \text{ m}^2 \\ \pi &= \underline{\underline{7\frac{21}{22} \text{ m}^2}} \end{aligned}$$

③ a.) krog  
 $r = 40 \text{ cm}$   
 $\pi = ?$

$$\begin{aligned} \pi &= \tilde{\pi} r^2 \\ \pi &= 40^2 \tilde{\pi} \\ \pi &= \underline{\underline{1600\tilde{\pi} \text{ cm}^2}} \end{aligned}$$

5.



$a = 2r$

$2r = 12 \text{ cm}$   
 $r = 6 \text{ cm}$   


---

 $p_o = ?$   
 $p_{\square} = ?$   
 $p_{\square} - p_o = ?$

$p_o = \pi r^2$   
 $p_o = 3,14 \cdot 6^2$   
 $p_o = 3,14 \cdot 36$   
 $p_o = 113,04 \text{ cm}^2$

$p_{\square} = a^2$   
 $p_{\square} = 12^2$   
 $p_{\square} = 144 \text{ cm}^2$

$p_{\square} - p_o = 144 - 113,04$   
 $p_{\square} - p_o = 30,96 \text{ cm}^2$

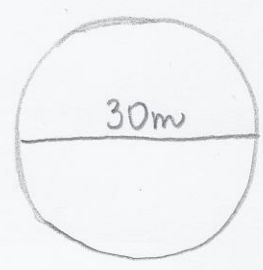
U.: Ploščina obarvanega dela je  $30,96 \text{ cm}^2$ .

7. okrogla greda

$2r = 30 \text{ m} \Rightarrow r = 15 \text{ m}$   
 $1 \text{ m}^2 \dots \dots 5 \text{ dag semena}$   


---

 $? \text{ semena}$   
 $p_o = ?$



$p = \pi r^2$   
 $p = 3,14 \cdot 15^2$   
 $p = 3,14 \cdot 225$   
 $p = 706,5 \text{ m}^2$

$\frac{706,5 \cdot 5 \text{ dag}}{3532,5 \text{ dag}} = 35,325 \text{ kg}$

U.: Potrebujejo  $35,325 \text{ kg}$  semena.

8.

|    | polmer | premer | obseg    | ploščina                |
|----|--------|--------|----------|-------------------------|
| K1 | 8 cm   | 16 cm  | 50,24 cm | 200,96 cm <sup>2</sup>  |
| K2 | 12 m   | 24 m   | 75,36 m  | 452,16 m <sup>2</sup>   |
| K3 | 7,5 mm | 15 mm  | 47,1 mm  | 176,625 mm <sup>2</sup> |
| K4 | 20 dm  | 40 dm  | 125,6 dm | 1256 dm <sup>2</sup>    |

$p = \pi r^2$   
 $r^2 = \frac{p}{\pi}$   
 $r = \sqrt{\frac{p}{\pi}}$

$K4: r = \sqrt{\frac{p}{\pi}}$   
 $r = \sqrt{\frac{1256}{3,14}}$   
 $r = \sqrt{\frac{125600 \cdot 4}{314 \cdot 1}}$   
 $r = \sqrt{400}$   
 $r = 20 \text{ dm}$

$K1: p = \pi r^2$   
 $p = 3,14 \cdot 8^2$   
 $p = 200,96 \text{ cm}^2$

$K2: p = \pi r^2$   
 $p = 3,14 \cdot 12^2$   
 $p = 452,16 \text{ m}^2$

$K3: p = \pi r^2$   
 $p = 3,14 \cdot 7,5^2$   
 $p = 176,625 \text{ mm}^2$

10. a)  $\sigma = 18,84 \text{ cm}$   
 $\mu = ?$   
 $r = ?$

$$\sigma = 2\pi r$$

$$r = \frac{\sigma}{2\pi}$$

$$r = \frac{18,84}{2 \cdot 3,14}$$

$$r = \frac{18,84}{6,28}$$

$$\underline{\underline{r = 3 \text{ cm}}}$$

$$\mu = \pi r^2$$

$$\mu = 3,14 \cdot 3^2$$

$$\mu = 3,14 \cdot 9$$

$$\underline{\underline{\mu = 28,26 \text{ cm}^2}}$$

b.)  $\sigma = 32\pi \text{ cm}$   
 $\mu = ?$   
 $r = ?$

$$\sigma = 2\pi r$$

$$r = \frac{\sigma}{2\pi}$$

$$r = \frac{32\pi \cdot 16}{2\pi \cdot 1}$$

$$\underline{\underline{r = 16 \text{ cm}}}$$

$$\mu = \pi r^2$$

$$\mu = 3,14 \cdot 16^2$$

$$\mu = 3,14 \cdot 256$$

$$\underline{\underline{\mu = 803,84 \text{ cm}^2}}$$

15.\*  $\mu = 49,6 \text{ cm}^2$   
 $r_1 = r + 0,5 \cdot r = (1 + 0,5) \cdot r = 1,5r$   
 polmet poroceni  
 za 50% = 0,5

$$\mu_1 = 2,25\pi r^2$$

$$\mu = 1\pi r^2$$


---


$$\mu_1 - \mu = 1,25\pi r^2$$

$$\mu = \pi r^2$$

$$\mu_1 = \pi r_1^2$$

$$\mu_1 = \pi (1,5r)^2$$

$$\mu_1 = \pi \cdot 2,25r^2$$

$$\mu_1 = 2,25 \cdot \pi r^2 \leftarrow \mu$$

$$\underline{\underline{\mu_1 = 2,25 \cdot \mu}}$$

$$2,25 - 1 = 1,25$$

W.: Ploščina kroga se spremeni za 125%.