

MATEMATIKA 8. ročník

178 (1)

14. - 22. 4. 2020

ŘEŠENÍ

PRO RYCHLIKŮ

1)



$$\sigma_k = \pi \cdot d$$

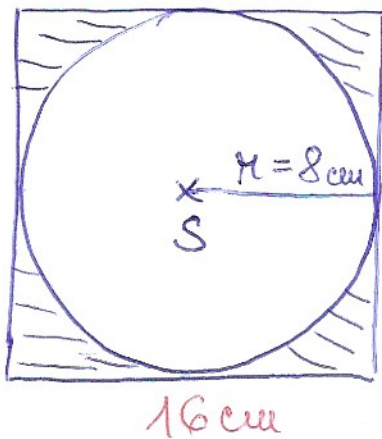
$$\sigma_k = 3,14 \cdot 1,6$$

$$\sigma_k = \underline{5,024 \text{ m}}$$

30 okružek ... $30 \cdot 5,024 = \underline{150,72 \text{ m}}$

Klec myšáků se spustí o 150,72 m.

2)



$$\sigma_{\square} = 4 \cdot a$$

/// - odpad

$$64 = 4 \cdot a$$

$$a = 64 : 4$$

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

$$S_{\square} = a^2$$

$$S_k = \pi \cdot r^2$$

$$S_{\square} = 16^2$$

$$S_k = 3,14 \cdot 8^2$$

$$S_{\square} = \underline{256 \text{ cm}^2}$$

$$S_k = \underline{200,96 \text{ cm}^2}$$

odpad ... $256 - 200,96 = \underline{55,04 \text{ cm}^2}$

100% ... 256

NEBO TROJČLENKOU!

1% ... 2,56

100% ... 256

x% ... 55,04

x% ... 55,04

$x = 55,04 : 2,56$

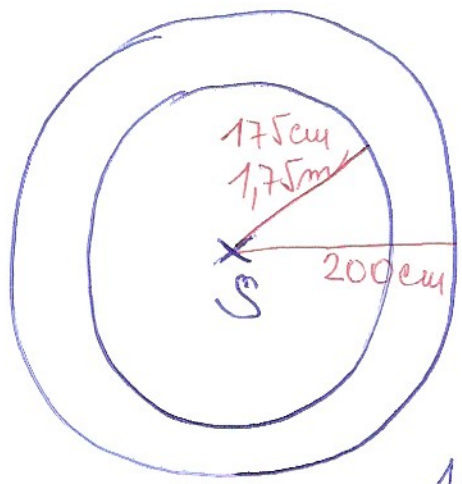
$\frac{x}{100} = \frac{55,04}{256}$

$x = 21,5\%$

$x = 21,5\%$

Na odpad
případně
21,5%
ctově.

3)



$$S_p = \pi \cdot r^2$$

$$S_p = 3,14 \cdot 200^2$$

$$S_p = 125600 \text{ cm}^2 = 12,56 \text{ m}^2$$

PRO RYCHLIKŮ

$$1 \text{ m}^2 \dots \dots 110 \text{ Kč}$$

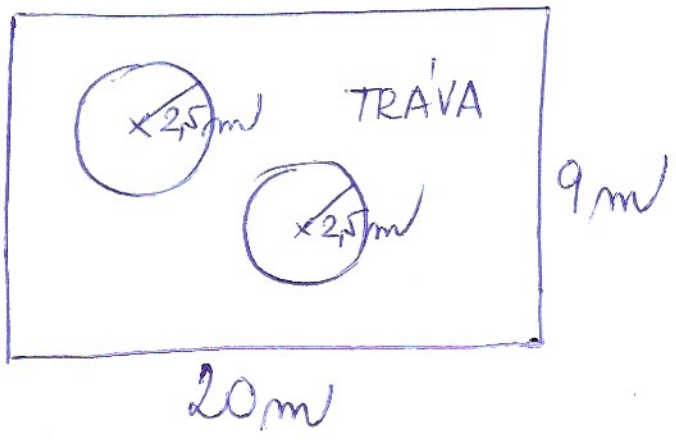
$$12,56 \text{ m}^2 \dots \dots x \text{ Kč}$$

$$x = 110 \cdot 12,56$$

$$x = 1381,60 \text{ Kč}$$

Plachba stála 1382 Kč

4)



$$S_{\square} = a \cdot b$$

$$S_{\square} = 20 \cdot 9$$

$$S_{\square} = 180 \text{ m}^2$$

$$S_k = \pi \cdot r^2$$

$$S_k = 3,14 \cdot 2,5^2$$

$$S_k = 19,625 \text{ m}^2$$

$$S_T = S_{\square} - 2 \cdot S_k$$

$$S_T = 180 - 2 \cdot 19,625$$

$$S_T = 180 - 39,25$$

$$S_T = 140,75 \text{ m}^2$$

$$100\% \dots \dots 180$$

$$1\% \dots \dots 1,8$$

$$x\% \dots \dots 140,75$$

Trava zaujima 78,2%

NEBO TROJČLENKA ←

$$100\% \dots \dots 180$$

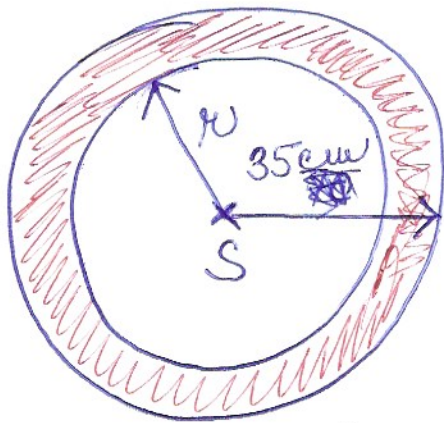
$$x\% \dots \dots 140,75$$

$$\frac{x}{100} = \frac{140,75}{180} \quad x = 78,2\%$$

$$x = 140,75 : 1,8$$

$$x = 78,2\%$$

5)



červená

plocha... mesíkruží

VK - velký kruh

BK - bílý kruh

PRO
RYCHLIKY

 S_M - obsah
mesíkruží

$$S_{VK} = \pi \cdot R^2$$

$$S_{VK} = 3,14 \cdot 35^2$$

$$S_{VK} = 3846,5 \text{ cm}^2$$

$$S_M = 1384,74 \text{ cm}^2$$

↑ bylo zadáno

$$S_{BK} = S_{VK} - S_M$$

$$S_{BK} = 3846,5 - 1384,74$$

$$S_{BK} = 2461,76 \text{ cm}^2$$

$$S_{BK} = \pi \cdot r_1^2$$

$$2461,76 = 3,14 \cdot r_1^2$$

$$r_1^2 = 2461,76 : 3,14$$

$$r_1^2 = 784$$

$$r_1 = \sqrt{784}$$

$$\underline{\underline{r_1 = 28 \text{ cm}}}$$

Poloměr bílého
kruhu je 28 cm.