

Řešení 24.3.

1. $(x^2 - 25)(x^2 + 6x + 9) = 0$

$(x+5)(x-5)(x+3)^2 = 0 \Rightarrow x=5; x=-5; x=-3$

2. 0,4l 40% džus $\Rightarrow 0,4 \cdot 0,4 = 0,16$ l džus 0,24l voda

$0,16 : 1,5 = 0,11 \overset{\leftarrow}{\Rightarrow} 11\%$

3. $4 - \frac{7-3x}{5} = 3 - \frac{3-7x}{10} - \frac{x+1}{3} \quad | \cdot 30$

$120 - 6 \cdot (7-3x) = 90 - 3(3-7x) - 10(x+1)$

$120 - 42 + 18x = 90 - 9 + 21x - 10x - 10$

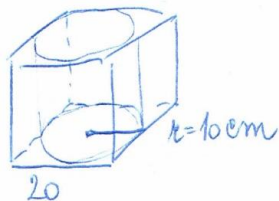
$78 + 18x = 71 + 11x$

$18x - 11x = 71 - 78$

$7x = -7$

$x = 7$

4.



$V_1 = a^3$
 $V_1 = 20^3$
 $V_1 = 8000 \text{ cm}^3$

$V_2 = \pi r^2 \cdot n$
 $V_2 = 3,14 \cdot 10^2 \cdot 20$
 $V_2 = 6280 \text{ cm}^3$

$\frac{V_2}{V_1} = \frac{6280}{8000} = 0,785 \Rightarrow 78,5\%$

5. Pavel 10 000 dní ... $10\,000 : 365 = \underline{27,4 \text{ let}}$

Ondra $100\,000\,000 \text{ s} : 3600 = 277\,777,8 \text{ h}$

$277\,777,8 : 24 = 11\,578,08 \text{ dní}$

$11\,578,08 : 365 = \underline{31,7 \text{ let}}$

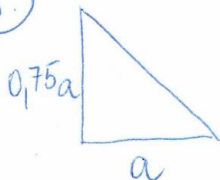
Tom $130\,000 \text{ h} : 24 = 5416,7 \text{ dní}$

$5416,7 : 365 = \underline{14,84 \text{ let}}$

Kolik máš let?

27; 31 nebo 14,84?

6.



$a \cdot 0,75a = 4P$

$0,75a^2 = 4P$

$a^2 = 64$

$a = 8 \text{ cm}$

$b = 0,75a$

$b = 0,75 \cdot 8$

$b = 6 \text{ cm}$

$c = \sqrt{a^2 + b^2}$

$c = \sqrt{8^2 + 6^2}$

$c = \sqrt{100}$

$c = 10 \text{ cm}$

$\sigma = a + b + c = 8 \text{ cm} + 6 \text{ cm} + 10 \text{ cm} = \underline{24 \text{ cm}}$