

VZOROVÝ TEST ① (míšení)

1. $a = 60 \text{ cm}$

$$N_{\text{H}_2\text{O}} = 60 \cdot \frac{7}{12} = (60:12) \cdot 7 = 35 \text{ cm} \quad (16)$$

$$V_{\text{H}_2\text{O}} = a \cdot a \cdot N_{\text{H}_2\text{O}} = 60 \cdot 60 \cdot 35 = 126000 \text{ cm}^3 = 126 \text{ l} \quad (16)$$

$$V_K = a \cdot a \cdot a = 60 \cdot 60 \cdot 60 = 216000 \text{ cm}^3 = 216 \text{ l} \quad (16)$$

máximálně ešte naliat $216 - 126 \text{ l} = 90 \text{ l} \quad (16)$

$$90 \text{ l} = \underline{\underline{0,9 \text{ hl}}} \quad (16)$$

2. povrch:

• zadná stena hore = $20 \cdot 5 = 100 \text{ dm}^2 \quad (0,56)$

• spodná podstava = $20 \cdot 12 = 240 \text{ dm}^2 \quad (0,56)$

• 2 x predná stena = $2 \cdot 20 \cdot 10 = 400 \text{ dm}^2 \quad (0,56)$

• 2 x bočná stena = $2 \cdot 12 \cdot 10 = 240 \text{ dm}^2 \quad (0,56)$

• šikmá stena = $20 \times 13 = 260 \text{ dm}^2 \quad (0,56)$

• 2 x trojuh. bočná stena = $2 \cdot \frac{12 \cdot 5}{2} = 60 \text{ dm}^2 \quad (0,56)$

$$\text{Spolu} = 1300 \text{ dm}^2 \Rightarrow \boxed{13 \text{ m}^2} \quad (16)$$

3. tupý uhol = 103°

väčší ostrý uhol = 42°

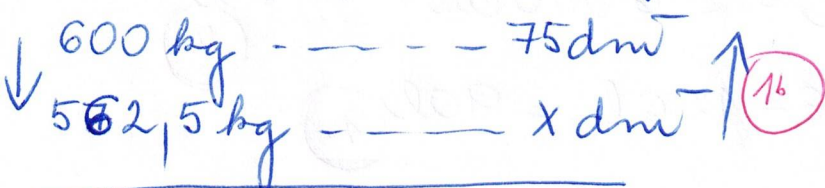
$$5 \cdot 103^\circ - 2 \cdot 42^\circ = 515^\circ - 84^\circ = \boxed{431^\circ} \quad (16)$$

4. $x = -1$ $y = -2$

$$\frac{3 \cdot (2 \cdot (-1)^2 - 5 \cdot (-2))}{(-1)^3 + (-2)^2} = \frac{3 \cdot (2 + 10)}{-1 + 4} = \frac{3 \cdot 12}{3} = \boxed{12}$$

5. $0,6 \text{ ton} = 600 \text{ kg}$

$$600 - 37,5 = 562,5 \text{ kg}$$



$$\frac{600}{562,5} = \frac{x}{75} \Rightarrow x = \frac{600 \cdot 75}{562,5} = 80$$

kasoba
vystaci ma
80 dm.

6. 1. číslo = 3,6

2. číslo = $3,6 \cdot 10,5 = 37,80$

3. číslo = $37,80 - 1,8 = 36$

sumar = $3,6 + 37,8 + 36 = 77,4$

7. Jakub : Peter = 5 : 6 $\cdot 2$

Peter : Lenka = 4 : 5 $\cdot 3$

10 : 12

12 : 15 \Rightarrow 10 : 12 : 15

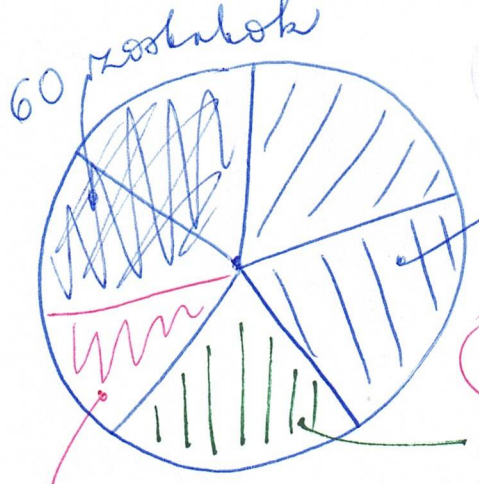
spolu 37 dielov

ponemu \rightarrow

1 dielik = $14800 : 37 = 400 \text{ €}$

\Rightarrow Jakub = $10 \cdot 400 = 4000 \text{ €}$

8.



36

1/3 zo vyjstku pre rameshvanos

$$60 kusov = \frac{3}{10} celku \Rightarrow celok = \left(\frac{60 : 3}{10}\right) \cdot 10$$

$$celok = \underline{200ks} \quad (1b)$$

9.

$$\frac{x}{24} - \frac{4 \cdot (x+2)}{3} = \frac{2 \cdot (3-x)}{4} + 2 \quad | \cdot 24$$

$$x - 32 \cdot (x+2) = 12 \cdot (3-x) + 48 \quad (1b)$$

$$x - 32x - 64 = 36 - 12x + 48$$

$$-31x - 64 = 84 - 12x$$

$$-31x + 12x = 64 + 84$$

$$-19x = 148 \quad (1b)$$

$$x = \frac{-148}{19} \quad (1b)$$

$$-\frac{148}{19} - \frac{1}{8} = \frac{-148 \cdot 8 - 1 \cdot 19}{152} = \frac{-1184 - 19}{152} = \underline{\underline{-\frac{1203}{152}}} \quad (1b)$$

10.

$$\alpha = 24^\circ$$

$$\beta = 24 \cdot 6,5 = 156^\circ \quad (2b)$$

$$\gamma = 24^\circ \quad (1b) \quad \delta = 156^\circ \Rightarrow \text{spolu } \underline{\underline{360^\circ}}$$

$$(11.) \quad -5A + 11 = \frac{2F}{-R+5} \quad | \cdot (-R+5)$$

$$(-5A+11) \cdot (-R+5) = 2F \quad (1b)$$

$$-R+5 = \frac{2F}{-5A+11} \quad (1b)$$

$$-R = \frac{2F}{11-5A} - 5 \quad | \cdot (-1) \quad (1b)$$

$$R = \frac{-2F}{11-5A} + 5 \quad (2b)$$

$$(12.) \quad \frac{a}{b} \Rightarrow \frac{a:2}{b \cdot 2} = \frac{\frac{a}{2}}{2b} = \frac{a}{4b} = \frac{1}{4} \cdot \frac{a}{b}$$

akoby sme ho vyjadrili číslom $\boxed{\frac{1}{4}}$ (1b)