

1. $\frac{2,5x - 2y}{2} - 2x = 3 \quad / \cdot 2$

Zk: $L_1 = P_1 = 3, L_2 = P_2 = 12$

$\frac{3x - 2y}{3} + 4 = 3x \quad / \cdot 3$

$y = -6 \quad [4, -6]$
 $x = 4$

2. 20% 90

100% 450

Neznámé číslo je 450.

3. $v_h = 15$ cm, $a = 12$ cm, 500 obalů, 10% na odpad

$S = S_p + S_{pl}$

$v = 12^2 - 6^2$

$S_p = 6 \cdot \frac{12 \cdot 10,39}{2}$

$S_{pl} = 6 \cdot 15 \cdot 12$

$S = 1\,454 \text{ cm}^2 = 0,145\,4 \text{ m}^2 \quad v = 10,39$ cm

$S_p = 374 \text{ cm}^2$

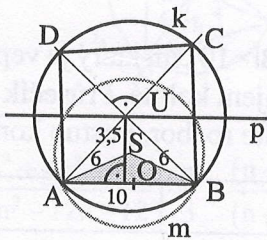
$S_{pl} = 1\,080 \text{ cm}^2$

$500 \cdot S = 72,7 \text{ m}^2 + 7,27 = 80 \text{ m}^2$

Na výrobu 500 obalů se spotřebuje 80 m^2 kartonu.

4. $\frac{x^2 + x}{y + 2} : \frac{xy + 2x + y + 2}{y^2 + 4y + 4} = \frac{x(x+1)}{y+2} \cdot \frac{(y+2)(x+2)}{(y+2)(x+1)} = x \quad \begin{matrix} x \neq -1 \\ y \neq -2 \end{matrix}$

5. Náčrt,
rozbor:



Pro body U, C, D platí:

$p \parallel AB; (p, AB) = 3,5$ cm

$m(O; \frac{1}{2}AB)$ (Thaletova kružnice)

$U \in p \cap m$

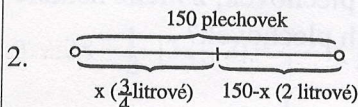
$C \in \rightarrow AU \cap k$ (dvě řešení)

$D \in \rightarrow BU \cap k$

1. $\left(\frac{x}{1-x} - 1\right) : \left(x - \frac{x^2}{x-1} - 1\right) = \frac{x-1+x}{1-x} \cdot \frac{x-1}{x^2-x-x^2-x+1} =$

$= \frac{2x-1}{-(x-1)} \cdot \frac{x-1}{-(2x-1)} = 1 \quad \begin{matrix} x \neq 1 \\ x \neq \frac{1}{2} \end{matrix}$

5. 12 kg škrobu 75%
 x kg brambor..... 100%
 $x = 16$ kg

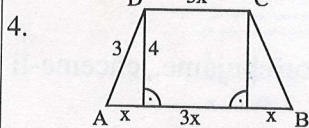


2. $\frac{3}{4}x + 2(150 - x) = 200$

Na 12 kg škrobu je třeba 16 kg brambor.

Prvních plechovek bylo 80 a druhých 70. $x = 80$

3. $\frac{4}{7} \cdot \sqrt{1,96} + 0,6^3 : 0,036 - \left(\frac{2}{5} - \frac{3}{4}\right) = \frac{4}{5} + 6 + \frac{7}{20} = 7\frac{3}{20}$



$x^2 = 6^2 - 4^2 \quad |AB| = 22,36$ cm

$S = \frac{(a+c) \cdot v}{2}$

$x = 2\sqrt{5} \quad |CD| = 13,41$ cm

$S = 71,55 \text{ cm}^2 \doteq 72 \text{ cm}^2$

Obsah lichoběžníku je 72 cm^2 .