

Řešení z 14.4.

1) $\frac{5}{6} h = 50 \text{ min} = 50 \cdot 60 s = 3000 s$

16 l za s $3000 \cdot 16 = 48000 \text{ l} = 48 \text{ m}^3$

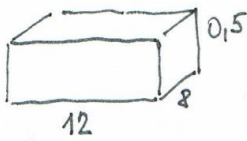
V.... 48 m^3

S.... $12 \cdot 8 = 96 \text{ m}^2$

r ... ?

$$r = \frac{V}{S} = \frac{48}{96} = 0,5 \text{ m}$$

boční stěny



$$S = 2 \cdot (12 \cdot 0,5 + 8 \cdot 0,5)$$

$$S = 2 (6 + 4)$$

$$S = 20 \text{ m}^2$$

2) 1. prac. x
 2. prac. $0,75x$
 3. prac. $\frac{7}{8}(x - 1500)$
 4. prac. $x - 1500$

$$x + 0,75x + \frac{7}{8}(x - 1500) + (x - 1500) = 28000$$

$$x + 0,75x + \frac{7}{8}x - \frac{10500}{8} + x - 1500 = 28000$$

$$2,75x + \frac{7}{8}x = 30812,5 \quad | \cdot 8$$

$$22x + 7x = 246500$$

$$29x = 246500$$

$$\underline{\underline{x = 8500}}$$

1. prac. 8500 Kč

2. prac. $0,75 \cdot 8500 = 6375 \text{ Kč}$

3. prac. $\frac{7}{8} \cdot (8500 - 1500) = 6125 \text{ Kč}$

4. prac. $8500 - 1500 = 7000 \text{ Kč}$

$$3) (x+2)^2 - (x+1)(x-1) = \frac{x+15}{3}$$

$$x^2 + 2x + 4 - x^2 + 1 = \frac{x+15}{3}$$

$$2x + 5 = \frac{x+15}{3} \quad | \cdot 3$$

$$6x + 15 = x + 15$$

$$5x = 0$$

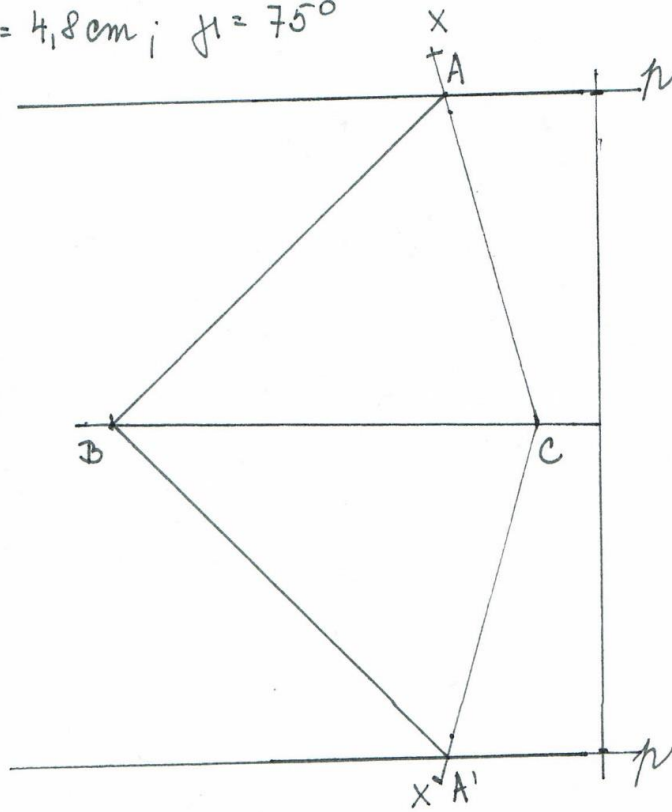
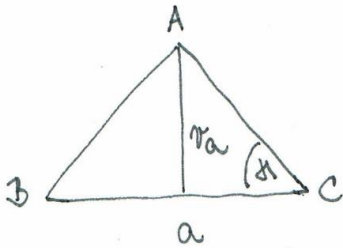
$$x = 0$$

$$\text{Zk. : } L = (0+2)^2 - (0+1)(0-1) =$$

$$4 - (-1) = 5$$

$$P = \frac{0+15}{3} = 5$$

$$4) a = 6,2 \text{ cm}; r_a = 4,8 \text{ cm}; \beta = 75^\circ$$



Zřešení

- 1) BC; $|BC| = 6,2 \text{ cm}$
- 2) $p; p \parallel BC$ ve vzdál. $4,8 \text{ cm}$
- 3) $\sphericalangle BCX$; $|\sphericalangle BCX| = 75^\circ$
- 4) A; $A \in \vec{CX} \cap p$
- 5) $\triangle ABC$

$$5) \left(\frac{1}{1-a} - 1 \right) : \left(\frac{2a^2}{1-a} - a \right) = \frac{1-1+a}{1-a} : \frac{2a^2 - a(1-a)}{1-a} =$$

$$= \frac{a}{1-a} : \frac{2a^2 - a + a^2}{1-a} = \frac{a}{1-a} \cdot \frac{1-a}{3a^2 - a} = \frac{a}{a(3a-1)} = \frac{1}{3a-1}$$

$$1-a \neq 0 \quad a \cdot (3a-1) \neq 0$$

$$\underline{a \neq 1} \quad \underline{a \neq 0} \quad \underline{3a-1 \neq 0}$$

$$\quad \quad \quad \quad \quad \quad \underline{a \neq \frac{1}{3}}$$

6) 1 traktor ... 10h
 2. traktor ... xh
 Společně 6h \Rightarrow 1. tr. ... $\frac{6}{10}$ 2. tr ... $\frac{6}{x}$

$$\frac{6}{10} + \frac{6}{x} = 1 \quad | \cdot 10x$$

$$6x + 60 = 10x$$

$$60 = 4x$$

$$15 = x$$

Druhý traktor by sám práci vykonal za 15h.