

$$\textcircled{1} (-0,4)^2 + 0,3^2 = 0,16 + 0,09 = \underline{0,25}$$

$$\textcircled{2} \quad \boxed{2.1} \quad \begin{array}{l} \uparrow 2 \text{ body} \dots \frac{5}{5} \uparrow \frac{x}{2} = \frac{2}{5} \\ x (2 \text{ body}) \dots \frac{2}{5} \end{array}$$

$$\lambda = \frac{4}{5} \text{ hoding}$$

$$\lambda = \frac{4 \cdot 60^{12}}{5} = \underline{48 \text{ min}}$$

$$\boxed{2.2} \quad \begin{array}{l} V_1 = 9500 \text{ mm}^3 = 9,5 \text{ cm}^3 \\ V_2 = 0,001 \text{ m}^3 = 1 \text{ cm}^3 \end{array} \quad \left. \vphantom{\begin{array}{l} V_1 \\ V_2 \end{array}} \right\} \underline{10,5 \text{ cm}^3}$$

$$\textcircled{3} \quad \boxed{2.1} \quad \left(\frac{1}{4} + \frac{5}{6}\right) \cdot \left(\frac{5}{13} - \frac{1}{2}\right) = \frac{3+10}{12} \cdot \frac{10-13}{26} = \frac{13}{4 \cdot 12} \cdot \frac{1-3}{26 \cdot 2}$$

$$= \underline{\underline{-\frac{1}{8}}}$$

$$\boxed{2.2} \quad \frac{\frac{6}{5}}{\frac{7 \cdot 4 - 4 \cdot 5}{2 \cdot 3}} = \frac{\frac{6}{5}}{\frac{14 - 5}{3}} = \frac{\frac{6}{5}}{\frac{9}{3}} = \frac{6}{5} \cdot \frac{3}{9} = \underline{\underline{\frac{2}{5}}}$$

$$(x^2 - 16) = (x - 4)(x + 4)$$

$$\begin{aligned} (2x + 5)^2 &= (2x)^2 + 2 \cdot 2x \cdot 5 + 5^2 \\ &= 4x^2 + 20x + 25 \end{aligned}$$

$$(2n + 6) \cdot (4n - 5) + (3 - 5) \cdot 2n - 5n \cdot (n - 2n) =$$

$$8n^2 - 10n + 24n - 30 - 4n + 5n^2 = \underline{\underline{13n^2 + 10n - 30}}$$

$$\begin{aligned}
 (5) \quad 3,2 - 0,5x - 1 &= 96 - 13x \\
 2,2 - 0,5x &= 96 - 13x \\
 1,6 &= -0,8x \\
 \underline{-2} &= x
 \end{aligned}$$

$$\frac{5z+3}{8} - \frac{z}{2} = \frac{4-z}{5} + \frac{2z-1}{10} \quad | \cdot 40$$

$$5 \cdot (5z+3) - 20z = 8 \cdot (4-z) + 4 \cdot (2z-1)$$

$$\cancel{25z} + 15 - \cancel{20z} = \cancel{32} - \cancel{8z} + \cancel{8z} - 4$$

$$5z + 15 = 28$$

$$5z = 13$$

$$\underline{\underline{z = \frac{13}{5}}}$$

$$\begin{aligned}
 26. \quad L &= \cancel{5} \frac{\frac{13}{5} + 3}{8} - \frac{\frac{13}{5}}{2} = \frac{16 - \frac{4 \cdot 13}{5}}{8} = \frac{80 - 52}{40} \\
 &= \frac{28}{40} = \underline{\underline{\frac{7}{10}}}
 \end{aligned}$$

$$P = \frac{4 - \frac{13}{5}}{5} + \frac{2 \cdot \frac{13}{5} - 1}{10} = \frac{8 - \frac{26}{5} + \frac{26}{5} - 1}{10} = \frac{7}{10}$$

$$L = P$$

5) 3 vady

I.	$\frac{x}{4}$
II	x
III. (100%)	<u><u>15x</u></u>

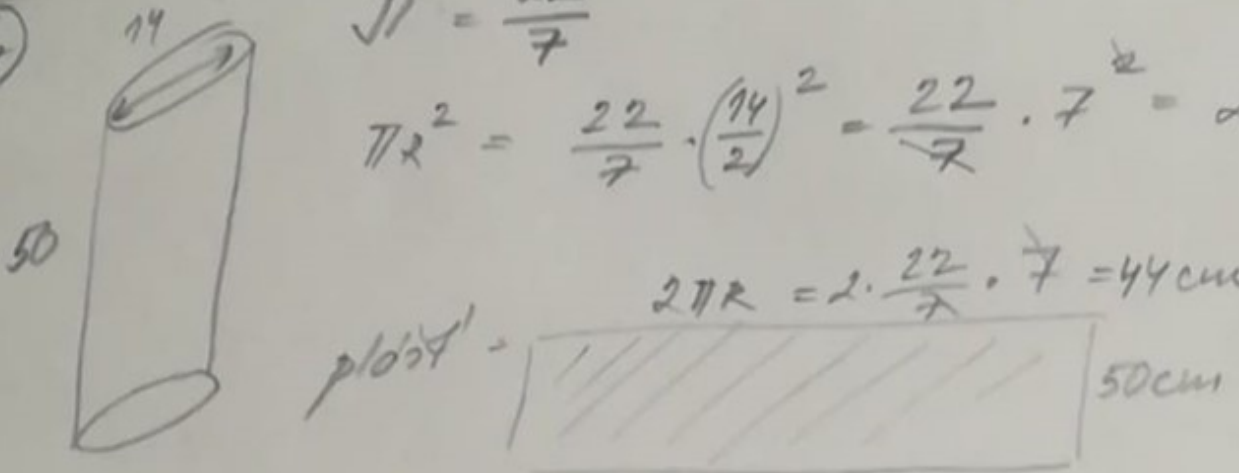
$$\frac{x}{4} + x + 15x = 5,5 \cdot 4$$

$$x + 4x + 60x = 22$$

$$65x = 22$$

$$x = 2 \text{ dily}$$

7)

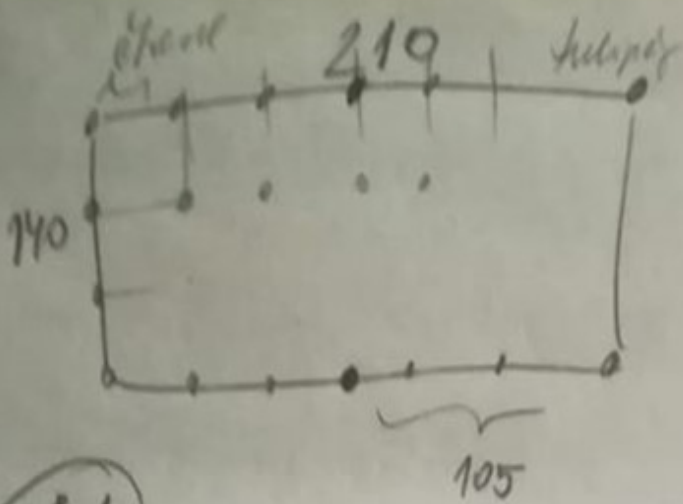


$$\pi r^2 = \frac{22}{7}$$

$$\pi r^2 = \frac{22}{7} \cdot \left(\frac{14}{2}\right)^2 = \frac{22}{7} \cdot 7^2 = 22 \cdot 7 = 154 \text{ cm}^2$$

$$2\pi r = 2 \cdot \frac{22}{7} \cdot 7 = 44 \text{ cm}$$

$$2\pi r \cdot v = 44 \cdot 50 = \underline{\underline{2000 \text{ cm}^2}}$$



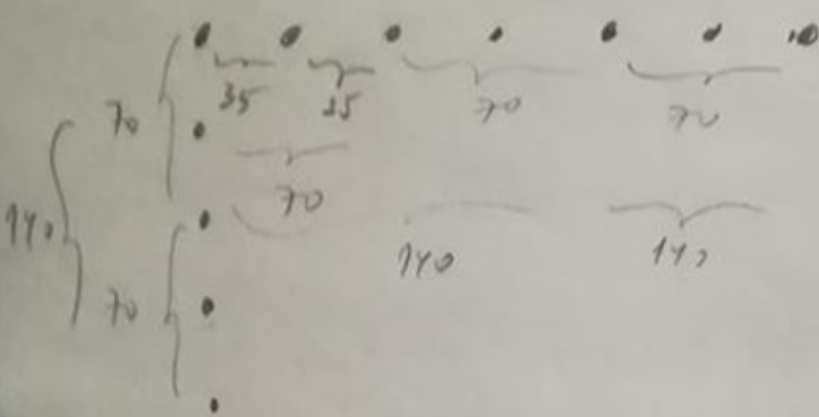
v každém řádku
počet je 5

8.1

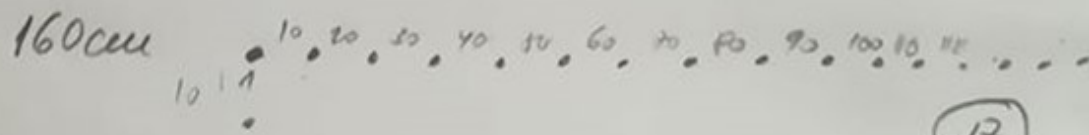
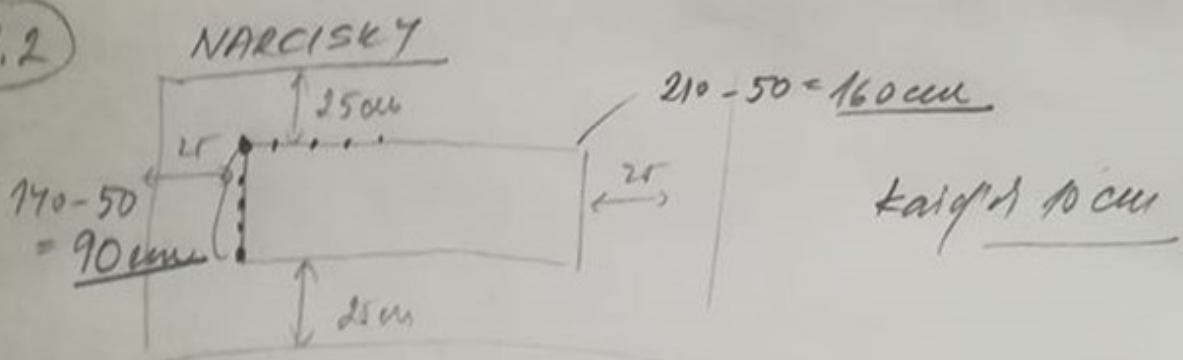
$$105 = 5 \cdot 21 = 5 \cdot 3 \cdot 7$$

$$140 = 2 \cdot 70 = 2 \cdot 2 \cdot 35 = 2 \cdot 2 \cdot 5 \cdot 7$$

35 cm



8.2

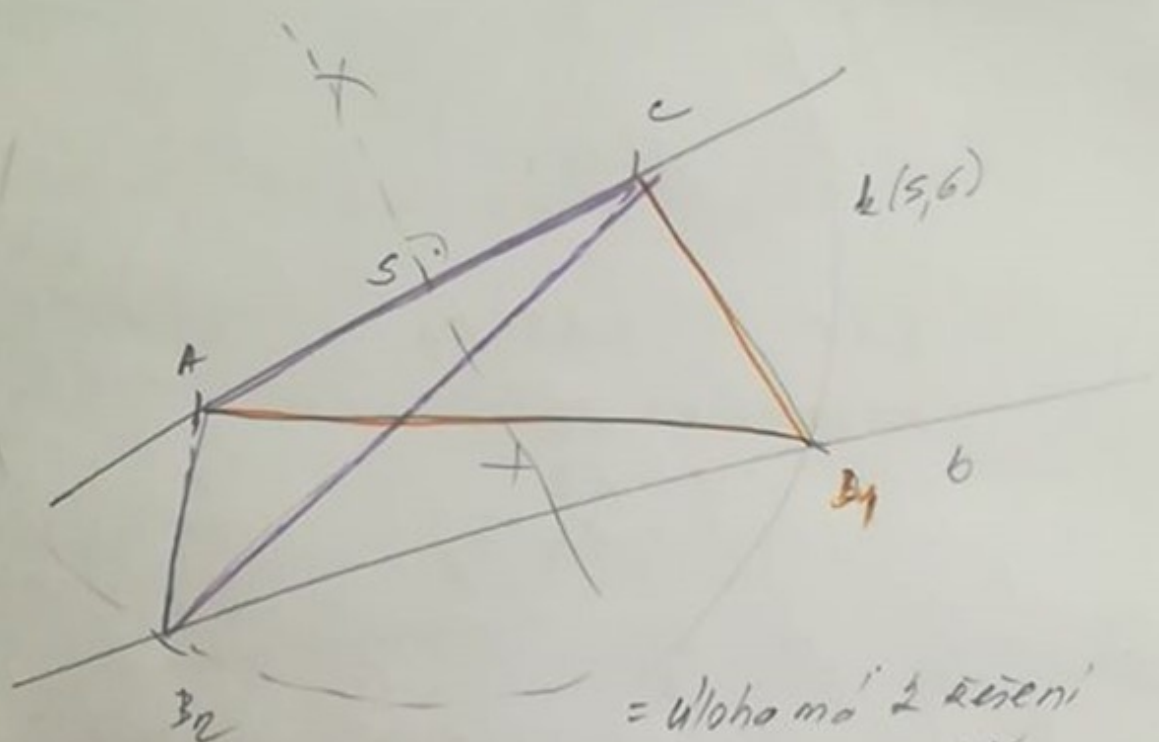


$$\begin{array}{r} 17 \times 2 = 34 \\ + \quad 16 \\ \hline 50 \end{array}$$

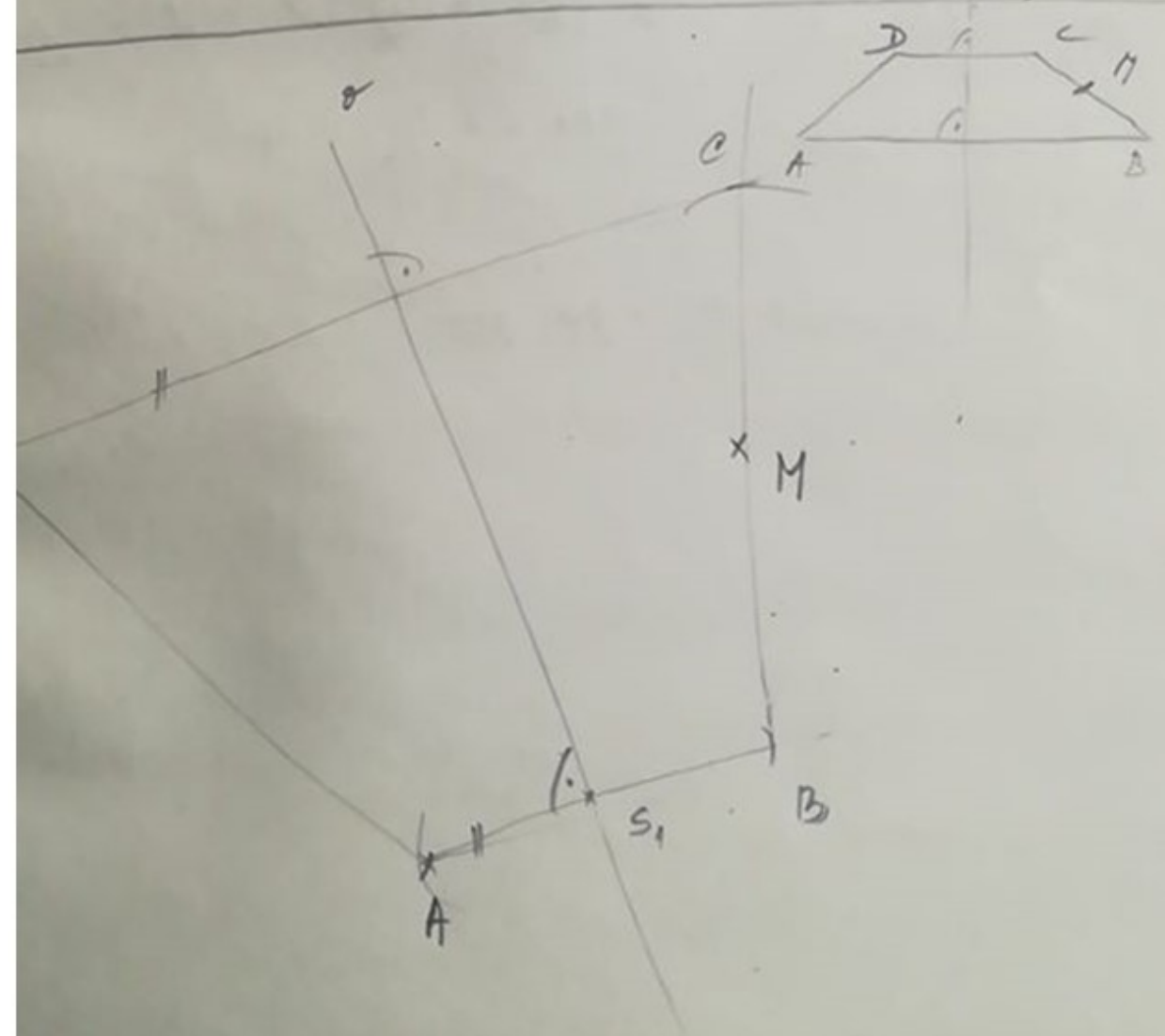
= 70 cm

$$8 \times 2 = 16$$

50 narcisků



= úloha má 2 řešení



11

$\frac{1}{2}$ plotu

6 hodin

vrchni

cely' plot

12 hodin

"

- 11.1 NE
- 11.2 ANO
- 11.5 ANO

$\frac{1}{2}$

6 hodin

vrchni x

$3 \cdot 6 = 18 \text{ hodin}$

$\frac{1}{3} \times$

$\frac{1}{2}$

6 hodin

vrchni

$\frac{1}{4}$

3 hodin

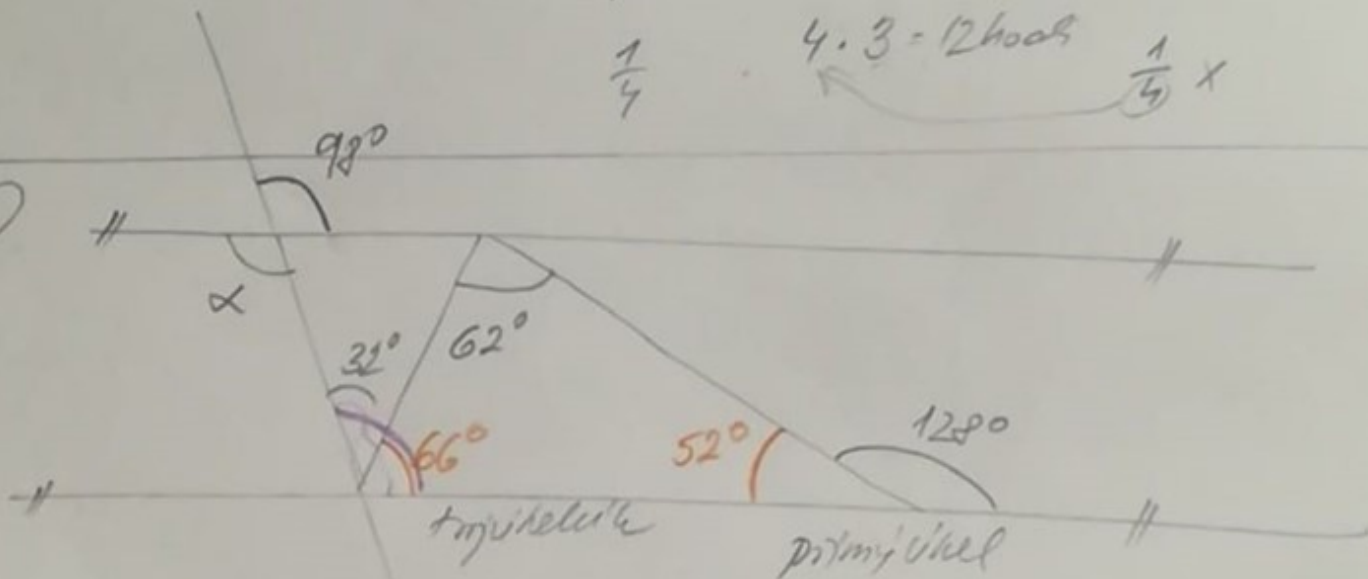
vrchni

$\frac{1}{4}$

$4 \cdot 3 = 12 \text{ hodin}$

$\frac{1}{4} \times$

12



B) - $\alpha = 98^\circ$

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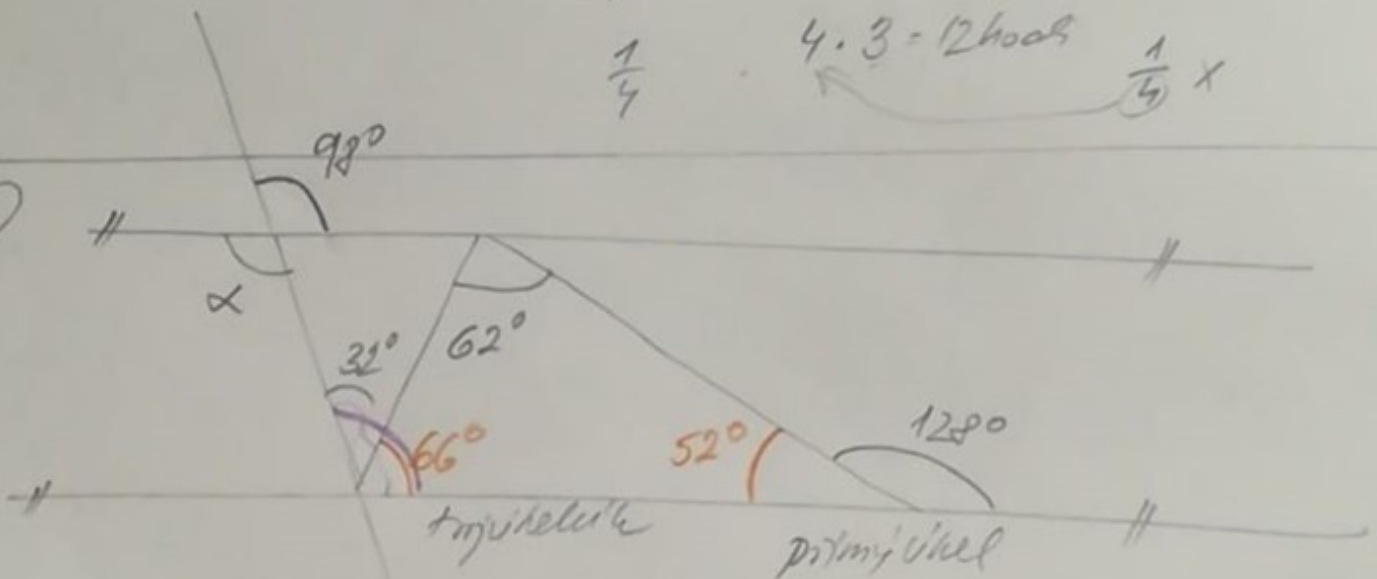
vrchni

$\frac{1}{4}$

$4 \cdot 3 = 12 \text{ hodin}$

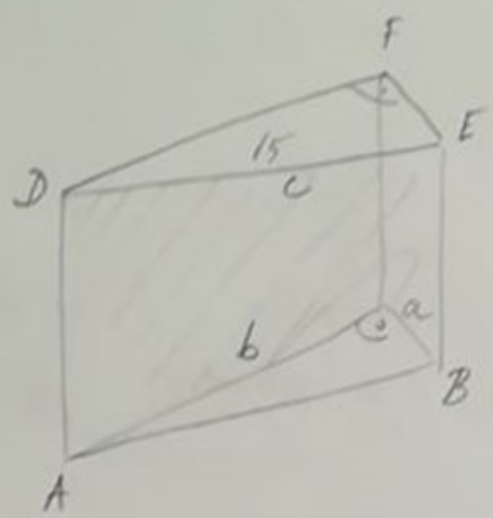
$\frac{1}{4} \times$

12



B) - $\alpha = 98^\circ$

13



$$a = 9 \text{ cm}$$

$$b = 12 \text{ cm}$$

$$c^2 = a^2 + b^2$$

$$c^2 = 81 + 144$$

$$c = \sqrt{225} = 15$$

$$S_{ABED} = 300 \text{ cm}^2$$

$$|AD| = |BE| = \frac{300}{15} = \underline{\underline{20}}$$

$$\text{povrch} = 300 + 9 \cdot 20 + 12 \cdot 20 + 9 \cdot 12$$

$$= 300 + 180 + 240 + 108$$

$$= 828 \text{ cm}^2$$

(A)

14



VYUŽIJEME
KOEFIČIENT
PODOBŇNOSTI

podobnost Δ : $\frac{z}{6} = \frac{6}{12} \Rightarrow \underline{\underline{z = 3}}$

$$\frac{x}{10} = \frac{6}{12} \Rightarrow \underline{\underline{x = 5}}$$

cel' trojčhlik $\frac{12 \cdot 6}{2} = 36 \text{ cm}^2$

$$\frac{6 \cdot 3}{2} = 9 \text{ cm}^2$$

$$\frac{5 \cdot 10}{2} = 25 \text{ cm}^2$$

$$\boxed{25 - 9 = 16 \text{ cm}^2}$$

(A)

15

zaplatilo . 40%
 musí zaplatit 60% . 264 ↓

$$\frac{x}{264} = \frac{40}{60}$$

$$x = \frac{240}{360} \cdot 264 = \underline{176}$$

$$\text{celkem} = 176 + 264 = \underline{440} \quad \text{(C)}$$

místá ve škole 540 žáků . $\frac{6}{5}$ kapacit ↑
 kapacit 3 $\frac{5}{5}$

$$\frac{3}{540} = \frac{\frac{5}{5}x}{\frac{6}{5}x}$$

$$3 = \frac{5}{6} \cdot 540 = \underline{450 \text{ žáků}} \quad \text{(D)}$$

taneční

↑ 25 žáků 50% ↑
 x 100%

$$\frac{x}{25} = \frac{100}{50}$$

$$x = \frac{100}{50} \cdot 25 = \underline{500}$$

judo

20 žáků

$\frac{1}{4} \cdot 220 \rightarrow$ chodí na judo i do tanečního
 5 ↑

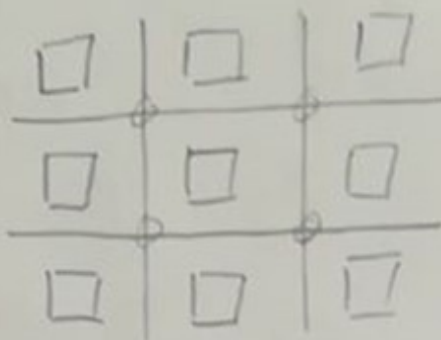
$$\text{chodí na nejvíce kroužků} \dots 25 + 15 = 40 \quad \text{(E)}$$

$$\text{nechodí nikam} = 500 - 40 = \underline{460}$$

16

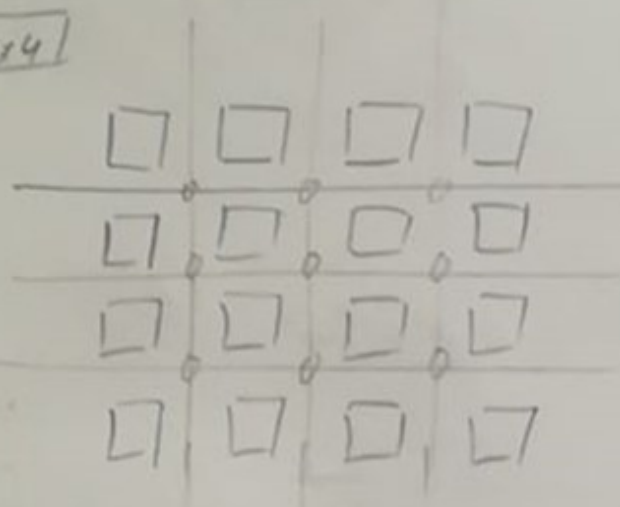


2x2 4 domy
2 ulice
1 koridor



3x3 9 domy
4 ulice
4 koridory

4x4



16 domy
6 ulice
9 koridorov

36 domy = 6 x 6 miesto
10 ulice

25 koridorov

	domy ^o	ulice	koridory
2x2	4 2 ²	2 2.1	1 1 ²
3x3	9 3 ²	4 2.2	4 2 ²
4x4	16 4 ²	6 2.3	9 3 ²
	5 ²	2.4	4 ²
6x6	6 ²	2.5	5 ²
	7 ²	2.6	6 ²

36 ulice

2 * 18 = 17² domy = 289