

14)   $S = 180\pi \text{ cm}^2$   
 $\pi = \frac{3}{4}d = \frac{6}{4}r = 1.5r$

$$S = 2\pi r^2 + 2\pi r \cdot v$$

$$180\pi = 2\pi r^2 + 2\pi r \cdot 1.5r$$

$$180\pi = 2\pi r^2 + 3\pi r^2$$

$$180\pi = 5\pi r^2$$

$$180 = 5r^2 \quad | :5$$

$$36 = r^2 \quad | \sqrt{\quad}$$

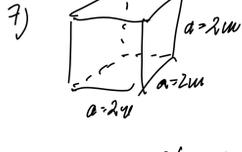
$$6 = r \quad \quad \quad v = 1.5 \cdot 6 = 9$$

Plášť  $S = 2\pi r \cdot v$   
 $S = 2\pi \cdot 6 \cdot 9 = 108\pi$

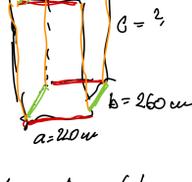
Podstava  $S = \pi r^2$   
 $S = \pi \cdot 6^2 = 36\pi$

$$108\pi - 36\pi = 72\pi$$

$$72 \cdot 3,14 \approx 226 \text{ cm}^2$$



$$12 \cdot 2 = 24 \text{ cm} = 2400 \text{ cm}^2$$



$$4c + 4a + 4b = 2400$$

$$4c + 80 + 1040 = 2400$$

$$4c + 1920 = 2400$$

$$4c = 2400 - 1920$$

$$4c = 480 \quad | :4$$

$$c = 120 \text{ cm}$$

$$120 : 260$$

$$12 : 26$$

$$\underline{\underline{6 : 13}}$$

- 2.1. 1 valnice = 12 konice  
 1 konice = 7 hrnček
- $$5l = 2 \text{ konice} + 6 \text{ hrnček}$$
- $$5l = 14 \text{ hrnček} + 6 \text{ hrnček}$$
- $$5l = 20 \text{ hrnček} \quad | :20$$
- $$0,25l = 1 \text{ hrnček}$$
- 1 valnice = 12 \cdot 7 hrnček  
 1 valnice = 84 hrnček  
 1 valnice = 84 \cdot 0,25l = 21l

2.2.  $\uparrow 540 \text{ kostek} \dots 8 \text{ cm}^3$   
 $x \text{ kostek} \dots 27 \text{ cm}^3 \downarrow$

$$\frac{x}{540} = \frac{8}{27} \quad | \cdot 540$$

$$x = \frac{8 \cdot 540}{27} = 160$$



- 6.1. 3  
 6.2. 6  
 6.3. 240

8.1 2019 začiatok 15  
 nový člen 4  
 ukončilo 6  
 $15 + 4 - 6 = 13$

8.2 2021 koniec 16  
 začiatok 12  
 nový x  
 koniec 1  
 $12 + x - 1 = 16$   
 $x + 11 = 16$   
 $x = 16 - 11$   
 $x = 5$

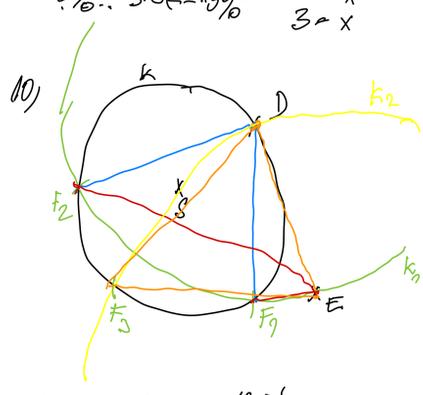
8.3 2022 koniec 17  
 začiatok 16  
 nový 4  
 ukončilo x

$$100\% \dots 20 \quad 16 + 4 - x = 17$$

$$190 \dots 0,2 \quad 20 - x = 17$$

$$200 \dots 5 : 0,2 = 150 \quad 20 - 17 = x$$

$$3 = x$$



15.1 30% ... 18 žien  
 10% ... 6 žien  
 100% ... 10 \cdot 6 = 60 žien  
 celkom! 60 + 18 = 78 žien

15.2 chlapci ... x  
 dievčatá ... 1,2x  
 celkom ... 77

$$x + 1,2x = 77$$

$$2,2x = 77 \quad | :2,2$$

$$x = \frac{77}{2,2}$$

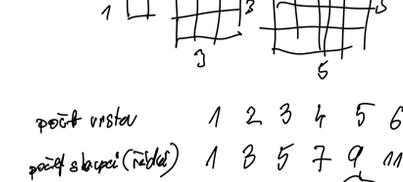
$$x = 35$$

dievčatá ... 1,2 \cdot 35 = 42

15.3  $\uparrow 210 \text{ divnák} \dots 120\% \uparrow$   
 $x \text{ divnák} \dots 20\% \uparrow$

$$\frac{x}{210} = \frac{20}{120} \quad | \cdot 210$$

$$x = \frac{210}{6} = 35$$



počet vrstiev	1	2	3	4	5	6	7
počet slonček (rôžok)	1	3	5	7	9	11	13
počet kostičok	1	9	25	49	81	121	169
počet kockov	1	8	27	64	125	216	343

$$1 + 9 + 25 + 49 + 81 + 121 + 169 = 455$$

$$(x - 1) \cdot 8 = 120$$

$$(x - 1) \cdot 8 = 120$$

$$8x - 8 = 120$$

$$8x = 128 \quad | :8$$

$$x = 16$$