


①  $-(-3 - (-2)) = -(-3 + 2) = -(-1) = +1$   
C

②  $10 : \frac{2}{5} = 10 \cdot \frac{5}{2} = 5 \cdot 2 = 10 = \frac{15}{1}$   
C


③  $a - b$  ;  $a - 10 - (b + 20) = a - 10 - b - 20 = a - b - 30$   
D  
 $\text{or } -30$

④   $\begin{matrix} \alpha = \beta = x \\ \gamma = 6x \\ \alpha = ? \end{matrix}$   $\begin{matrix} x + x + 6x = 180^\circ \\ 8x = 180^\circ / : 8 \\ x = 180 : 8 = 22,5^\circ \\ 22,5 \in (10; 30) \end{matrix}$   
B

⑤  $\frac{5}{6}$  je 9000  $\rightarrow \frac{1}{6}$  je 9000 : 6 = 1500  $\rightarrow \frac{5}{6}$  je 1800 · 6 = 10 800  
B  
 $\frac{3}{4}$  z 10 800 je  $\frac{3}{4} \cdot 10 800 = 8 100$

⑥  $\text{maxim } 100\% = 100$   
B  $\text{minimálne } 10\% = 90$   
90 minimálne o 15%, čiže na 85% ...  $\frac{85}{100} \cdot 90 = 46,5$   
rozdíl  $100 - 46,5 = 23,5\%$  menej

⑦  $\left. \begin{array}{l} \text{rychl } \frac{2}{5} \rightarrow \text{ostalo } \frac{3}{5} \\ \text{rychl } \frac{3}{16} \dots \frac{3}{16} \cdot \frac{3}{5} = \frac{9}{80} \end{array} \right\} \text{z toho rychl}$   
D  $\frac{3}{5} + \frac{9}{80} = \frac{24 + 9}{80} = \frac{41}{80}$   
ostalo ...  $1 - \frac{41}{80} = \frac{80 - 41}{80} = \frac{39}{80}$



⑧   $60\text{m}$   $4\text{km} = 4000\text{m}$   
C  $\begin{matrix} \uparrow 100\% \dots 4000 \uparrow \\ \uparrow x\% \dots 60 \uparrow \end{matrix}$   
 $x = \frac{100 \cdot 60}{4000} = \frac{3}{2} = 1,5\%$


⑨ I  $\text{love, doll, slaw, spaw}$   
D  $\text{upeda, vradu}$   
 $4+4+4+3+5+5 = 38$

II  $\text{jednotlivé slovy}$   
 $5+2+5+5+4+5+3+4+5 = 38$


10  
A  $a = \frac{x}{2} - 20 \quad / +20$   
 $a + 20 = \frac{x}{2}$

11  
C větší mořnali ... 6.6 = 36  
sál menší als 4 ... 2+1, 1+2, 1+1 ... 3 mořnali  
 $P = \frac{3}{36} = \frac{1}{12}$

12  
C   $4+4 = 8 \text{ hran}$    $3+3+3 = 9 \text{ hran}$   
spolu 8+9 = 17

13  
C   $14+128+1 = 143$


14  
D mala'  $V = 8 \text{ cm}^3$   $V = a^3$   
 $a = \sqrt[3]{8} = 2 \text{ cm}$   
velká'  $a' = 4 \text{ cm}$   $S = 6 \cdot a^2$   
 $S = 6 \cdot 4^2 = 6 \cdot 16 = 96 \text{ cm}^2$

15  
A  vzdálenosti  $11 - (-4) = 15$   
 $3 \cdot 15 = 45$   
 $x_1 = 6 - 45 = -39$   
 $x_2 = 6 + 45 = +$

16  
B 3, 4, 5, 8 2-číslo, každá ita roz (n slok)  
sál nejvíce mořný  $\rightarrow$  na rozálka 8 a 5  
1)  $84 + 53 = 137$  2)  $83 + 54 = 137$

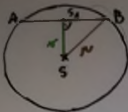
17  
D 

dvojka ... od 1 pr 9 ... 4x od 10 ... 19 ... 1x od 10 ... 19 ... 11x od 20 ... 99 ... 1x od 20 ... 99	od 9 pr 99 ... 11+9 = 20 hran od 100 pr 199 ... 20 hran od 200 pr 299 ... 20+100 = 120 hran ... spolu 9 \cdot 20 + 120 = 300
---	--

18  
C   $x = 60 : 5 = 12 \text{ m}$   
od 1 pr 8 ...  $60 + 2 \cdot 12 = 84 \text{ m}$   
aldr  $7 \cdot 12 = 84 \text{ m}$

19

A



Rediwa AB,  $\Delta ABS$  norovramennyj

$$\Delta BPS: r^2 = r^2 + \left(\frac{r}{2}\right)^2$$

$$52^2 = r^2 + 20^2$$

$$r^2 = 2304 - 400$$

$$r = \sqrt{2304} = 48 \text{ cm}, 48 \text{ c } (40, 50)$$

20

$$\sigma 20\% \rightarrow m 60\%$$

$$\begin{array}{r} 80\% \dots 1200 \uparrow \\ 100\% \dots X \end{array}$$

$$x = \frac{1200 \cdot 100}{80} = 1500 \text{ €}$$

21

a)  $S = 2 \cdot (ab + ac + bc)$

$$432 = 2 \cdot (6 \cdot 12 + 6c + 12c) \quad | :2$$

$$216 = 42 + 18c \quad | -42$$

$$144 = 18c \quad | :18$$

$$c = 8 \text{ cm}$$

b)  $V = a \cdot b \cdot c$

$$V = 6 \cdot 12 \cdot 8$$

$$V = 576 \text{ cm}^3$$

22

2. lovan

medlo = 100%

$$\begin{array}{r} \uparrow 100\% \dots 360 \text{ €} \\ 20\% \dots X \end{array}$$

$$x = \frac{360 \cdot 20}{100} = 72 \text{ € DPH}$$

brutto = 120%

$$360 + 72 = 432 \text{ € BR}$$

3. lovan

20% ... 360 €

100% ... X

$$x = \frac{360 \cdot 100}{20}$$

$$x = 1800 \text{ € NETTO}$$

brutto

$$1800 + 360 = 2160 \text{ € BR}$$

4. lovan

120% ... 360

100% ... X

$$x = \frac{360 \cdot 100}{120}$$

$$x = 300 \text{ € NETTO}$$

$$20\% \dots \frac{20}{100} \cdot 300 = 60 \text{ € DPH}$$

23

$$S = 132,665 \text{ cm}^2$$

$$\sigma = ?$$

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

$$132,665 = 3,14 \cdot r^2 \quad | :3,14$$

$$r^2 = 42,25$$

$$r = \sqrt{42,25} = 6,5 \text{ cm}$$

$$\sigma = 2\pi r$$

$$\sigma = 2 \cdot 3,14 \cdot 6,5$$

$$\sigma = 40,82 \text{ cm}$$

24) a)  $\boxed{7}$  b)  $\boxed{0}$

c) diagonal  $6+3+2+1 = \boxed{12}$

d) diagonal  $7+2+3+1 = 13$

e)  $6+3 = \boxed{9}$

f)

1	2	3	4	5
13	5	5	1	1

vredajel  $12+13 = 25$  n.

$\boxed{0.1}$

$$\bar{x} = \frac{1 \cdot 13 + 2 \cdot 5 + 3 \cdot 5 + 4 \cdot 1 + 5 \cdot 1}{25}$$

$$\bar{x} = \frac{47}{25} = \boxed{1.88}$$

25) mat' ...  $n=1$   
 $n=1$

$$V = \sqrt[n]{n^2 \cdot n}$$

$$V = \sqrt[1]{1^2 \cdot 1}$$

$$V = \sqrt{1}$$

mat' ...  $n=2$   
 $n=3$

$$V^1 = \sqrt[2]{2^2 \cdot 3}$$

$$V^1 = \sqrt[2]{12}$$

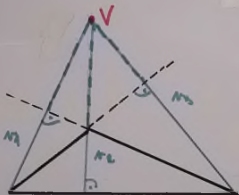
...  $\boxed{12x}$

26)  $3 - \frac{x-1}{4} = 1 / .4$

$$12 - x + 1 = 4$$

$\boxed{x=9}$

27) a)



b)

