① $\frac{6}{17}$

② $\frac{3x}{4} - x + \frac{1}{6} = \frac{9x - 12x + 2x}{12} = \frac{-x}{12}$

⑥ $= 9x^2 - 6x + 1 + 4 - 3x + 3x^2 = 12x^2 - 9x + 5$

③ $x - 3 = \frac{3x - 4}{8} \quad / \cdot 8$

$8x - 24 = 3x - 4$

$5x = +20$

$x = +4$

zk: $L = 1$

$P = 1$

$\frac{9}{4} \cdot x + \frac{5}{4} = \frac{11}{10}x - 1 \quad / \cdot 20$

$45x + 25 = 30x - 20$

$15x = -45$

$x = -3$

zk: $L = \frac{9}{4} \cdot (-3) + \frac{5}{4} = -\frac{27}{4} + \frac{5}{4} = -\frac{22}{4} = -\frac{11}{2}$

$P = \frac{11}{10}(-3) - 1 = \frac{3}{2} \cdot (-3) = 1 = \frac{-9}{2} - 1 = -\frac{11}{2}$

④ a) $\frac{3}{7} \cdot 4 = \frac{12}{7}$

b) $\frac{3}{7} : \frac{1}{3} = \frac{3}{7} \cdot \frac{3}{1} = \frac{1}{7}$

c) $\frac{40}{100} \cdot \frac{3}{7} = \frac{12}{70} = \frac{12}{70}$

d) $5 \cdot \left(\frac{3}{7} \cdot 2\right) = 5 \cdot \frac{3}{7} \cdot \frac{1}{2} = \frac{15}{14}$

⑤ $15 + 3 \cdot 7 = 36$

$102 : 14 \cdot \frac{4}{3} = 8$

⑥ $9,3 - 1,6 = 7,7$

a) $7,7 : 11 = 0,7$

$0,7 \cdot 2 = 1,41$

b) $3 \cdot 90 = 270 \quad - \quad 1600 - 270 = 1330$

$1330 : 2 = 665$ Kč

⑦ 1. os 350

2. os 245

4 os. 4 · 210

$1435 : 6 = 239,17 = 239$ Kč

⑧ 15 000 $\xrightarrow{-2250}$ 12750 $\xrightarrow{-20\%}$ 10200 Kč

a) cena 15 000, slevěno 4800 Kč

b) celkem 32 %

⑨ 100 g A 0,125

B 0,1152

C 0,11 $\Rightarrow$ (C)

D 0,113

⑩ $\frac{L}{2} = 70\,m$

$\frac{L}{2} = \frac{\pi d}{2}$

$d =$

$70 = \frac{\pi \cdot d}{2}$

$140 = 3 \cdot d$

$d = 140 : \pi$

$d = 44,13 = 45$

$70 - 45 = 25$ kroků

(11) $180 : 6 = 30^\circ$

(12) a) $(-6+1)^2 = (-5)^2 = 25$ N
b) A
c) A
d) N

(13) a) N
b) N
c) N
d) A

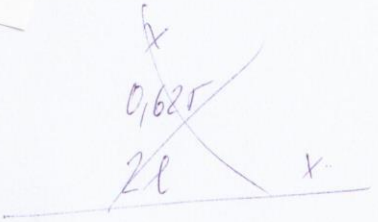
(14) A, C

| | T | H |
|---|---|---|
| D | 92 | 120 |
| C+ | 120 | 30 |

(15)

| | | | |
|---|---|---|---|
| kys. | 90% | x | 0,9x |
| voda | 0° | y | 0y |
| směs | 60% | 2l | 0,6·2 |

$x + y = 2$
$0{,}9x + 0 = 0{,}6 \cdot 2$
$0{,}9x = 1{,}2$
$x = 1{,}3\bar{3}$ l kyseliny $\Rightarrow$
voda $0{,}6\bar{6}$ $\Rightarrow$ voda vyšla



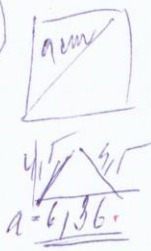

(16) $V = \pi r^2 v$
$v = \frac{V}{\pi r^2} = \frac{1100}{2\pi} = 6\,cm$

(17) 10 min 4 km $\Rightarrow$ za 1 min 800 m
a) 800 m
b) za 10 min 800 m $\Rightarrow$ 6 · 800 = 4800 m/h = 4,8 km

| | |
|---|---|
| x min | 1000 m |

$x = \frac{1000}{800} \cdot 10 = 12{,}5$ min

(18)

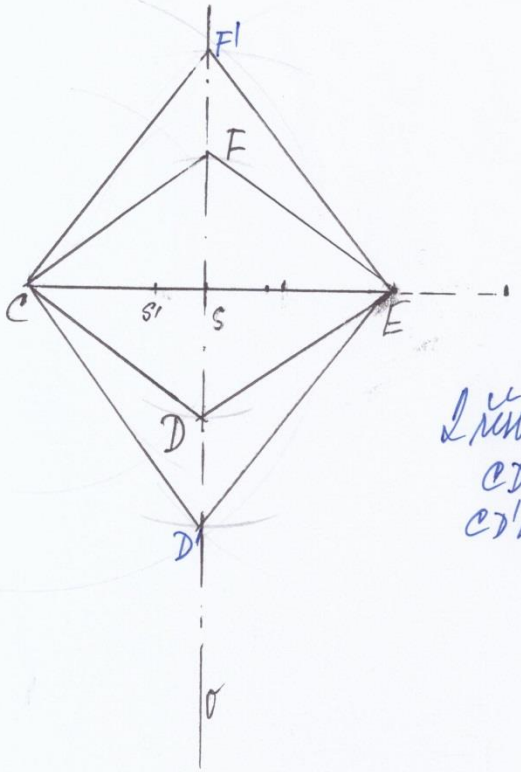



$V = 254{,}44\,cm^3$

$v = \frac{254{,}44}{\pi r^2} = \frac{254{,}44}{63{,}585} = 4{,}05$

a) $v_3 = 12{,}16$ cm $\Rightarrow 15 + 12{,}16 = 27{,}160$

b) 2,8 cm
c) 4




Deux :
CDEF
CD'EF'