UTRJEVANJE ZNANJA, 9.r. 16.3.2018

① Yanez 35% od $3200 = 0{,}35 \cdot 3200 = 1120$

$3200 - 1120 = 2080$

M : P = 2 : 3

$2t + 3t = 2080$

$5t = 2080$

$t = 2080 : 5$

$\boxed{t = 416}$

$M = 2t = 2 \cdot 416 = 832$

$P = 3t = 3 \cdot 416 = 1248$

Yanez je dobil 1120 €, Miha 832 €, Petru pa 1248 €.

② Pravokotnik

$a : b = 6 : 5$

$p = 270\ cm^2$

$o = ?$

$a = 6t = 18\ cm$

$b = 5t = 15\ cm$

$o = 2(a + b)$

$o = 2 \cdot (18 + 15)$

$\boxed{o = 66\ cm}$

$a \cdot b = 270$

$6t \cdot 5t = 270$

$30t^2 = 270$

$t^2 = 270 : 30$

$t^2 = 9$

$\boxed{t = 3}$

③ Pravokotni trikotnik ABC

$k_1 = 6\ cm$

$k_2 = 8\ cm$

$k^2 = k_1^2 + k_2^2$

$k^2 = 6^2 + 8^2$

$k^2 = 36 + 64$

$k^2 = 100$

$\boxed{k = 10\ cm}$

Pravokotni $\triangle A'B'C'$

$k = 1{,}5$

$k' = ?$

$\frac{k'}{k} = k$

$k' = k \cdot k$

$k' = 10 \cdot 1{,}5$

$\boxed{k' = 15\ cm}$

$\frac{o'}{o} = k$

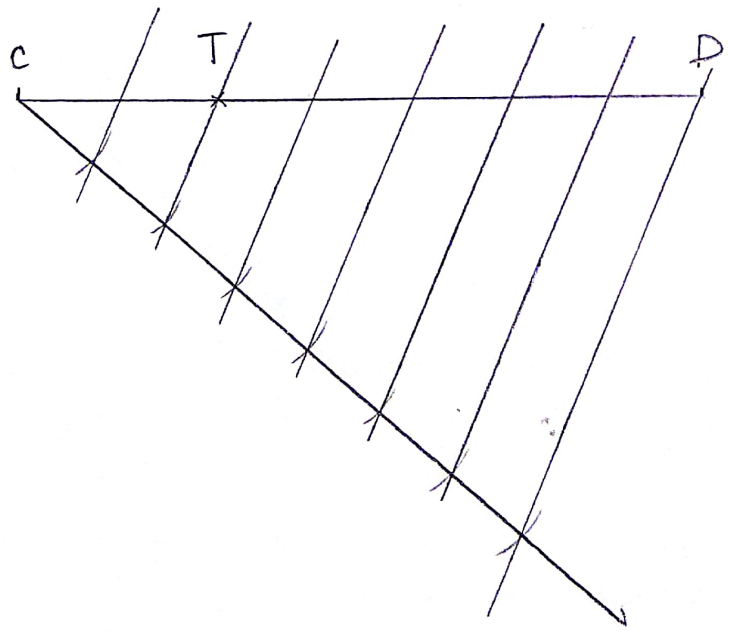
$\boxed{\frac{o'}{o} = 1{,}5}$

$\frac{p'}{p_1} = k^2$

$\frac{p'}{p} = 1{,}5^2$

$\boxed{\frac{p'}{p} = 2{,}25}$

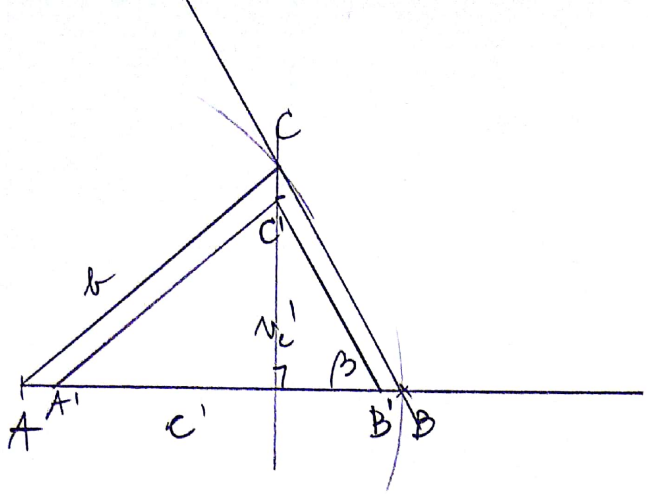
④



$|CT| : |CD| = 2 : 7$

$|TD| : |CD| = 5 : 7$

⑤



⑥ $|BC| : |AC| = |BD| : |AE|$

$32 : |AC| = 18 : 22,5$

$|AC| \cdot 18 = 32 \cdot 22,5$

$|AC| = \frac{32 \cdot 22,5}{18}$

$\boxed{|AC| = 40 \text{ cm}}$

$|AB| = |AC| - |BC|$

$|AB| = 40 - 32$

$\boxed{|AB| = 8 \text{ cm}}$

$|CD| : |CE| = |BD| : |AE|$

$x : (x+5) = 18 : 22,5$

$x \cdot 22,5 = 18(x+5)$

$x \cdot 22,5 = 18x + 90$

$22,5x - 18x = 90$

$4,5x = 90$

$x = 90 : 4,5$

$x = 20$

$\boxed{|CD| = 20 \text{ cm}}$

⑦ a) $a \cap b = \{C\}$, b) $t \subset R$ c) $c \cap d = \emptyset$

⑧ n, M, N, P

⑨ piramida, prizma, valj, stožac

⑩ okrogla, vičnim, osnovni, vzporednih, pravokotnih, osnovna, makoroba, enakostranični trikotnik, kvadrati

⑪ Mreža

$P = 6,25 \text{ cm}^2$

$a^2 = 6,25$

$a = \sqrt{6,25}$

$\boxed{a = 2,5 \text{ cm}}$

$V = O \cdot v$

$V = 6,25 \cdot 5 = 31,25 \text{ cm}^3$

$\boxed{V = 0,03125 \text{ dm}^3}$

⑫ 3-strana prizma

$pl = o \cdot v$

$1240 = (10 + 12 + 18) \cdot v$

$v = \frac{1240}{40}$

$\boxed{v = 31 \text{ cm}}$

⑬ Pravilna 5-strana prizma

$pl = 2 \text{ m}^2$

$v = 80 \text{ cm}$

$o = ?$

$pl = o \cdot v$

$o = \frac{pl}{v}$

$o = \frac{20000}{80}$

$\boxed{o = 250 \text{ cm}}$

⑭ kocka

$a = 12 \text{ cm}$

$P = ?$

$P = 6 \cdot a^2$

$P = 6 \cdot 12^2$

$P = 6 \cdot 144$

$\boxed{P = 864 \text{ cm}^2}$

kvader

$a = 4 \text{ cm}$

$b = 10 \text{ cm}$

$P = 864 \text{ cm}^2$

$c = ?$

$2ab + 2ac + 2bc = 864$

$2 \cdot 10 \cdot 4 + 2 \cdot 4c + 2 \cdot 10c = 864$

$80 + 8c + 20c = 864$

$28c = 864 - 80$

$28c = 784$

$c = 784 : 28$

$\boxed{c = 28 \text{ cm}}$