

P.
Varianta 4

Subiectul I.

1. 5 050 005

2. 2 679 382

3. $13\ 700 : 67 = 204$ rest 23

4. $M_{24} \neq 24$
 $M_{24} > 24 \quad | \Rightarrow 2 \cdot 24 = 48$

R: 48

5. $2^{35} : 2^{32} - 2^0 = 2^{35-32} - 1 = 2^3 - 1 = 8 - 1 = 7$

6. nr. tuburilor colectate = 50

Subiectul II-lea

7. $a = 14$

$b + c = 56$

$34b + 34c - 56a = 34(b+c) - 56 \cdot 14 = 34 \cdot 56 - 56 \cdot 14 =$
 $= 56 \cdot (34 - 14) = 56 \cdot 20 = 1120$

8. $\overline{201m} : 5 \Rightarrow m = \{0, 5\}$

$\overline{201m} = \{2010; 2015\}$

9. $15^2 - 5 \cdot [(5^7)^8 : 5^{30} + 5 \cdot 5^{21} - 5^{26}] : 25^{10} =$

$= 225 - 5 \cdot (5^{56-30} + 5^{1+21} - 5^{26}) : (5^2)^{10} =$

$= 225 - 5 \cdot (\cancel{5^{26}} + 5^{22} - \cancel{5^{26}}) : 5^{20} =$

$= 225 - 5 \cdot 5^{22} : 5^{20} = 225 - 5^{1+22-20} =$

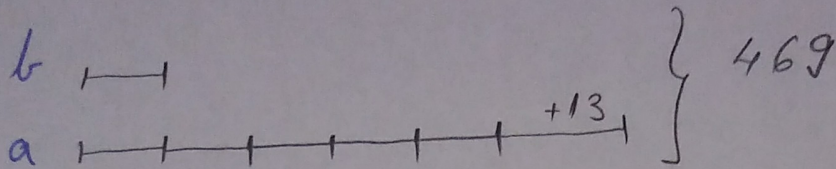
$= 225 - 5^{23-20} = 225 - 5^3 = 225 - 125 = 100$

Subiectul al III-lea

10. $a : b = 5 \text{ rest } 13 \Rightarrow a = 5b + 13$

$$a + b = 469$$

$$a, b = ?$$



$$469 - 13 = 456 \text{ (6 segmente egale)}$$

$$456 : 6 = 76 \text{ (b)}$$

$$76 \times 5 + 13 = 380 + 13 = 393 \text{ (a)}$$

R: 393; 76.

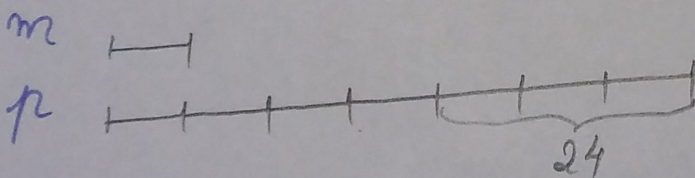
11. $p = \text{nr. de pune}$
 $m = \text{nr. de mere}$

$$p = 4 \cdot m$$

$$1 \text{ persoană ia} = 1p + 1m$$

$$4 \text{ persoane ia} = 4p + 4m$$

$$p - 4 = 7 \cdot (m - 4) \Rightarrow p = 7m - 28 + 4 \Rightarrow \underline{p = 7m - 24}$$



$$24 : 3 = 8 \text{ (1 segment) (mere)}$$

$$4 \cdot 8 = 32 \text{ (pere)}$$

- Problema se poate rezolva și prin alte metode.