# Varianta 6

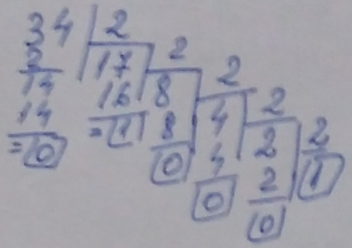
## Subiectul I

1. $7\,008\,305$ = șapte milioane opt mii trei sute cinci

2. $a = 12\,345$
   $b = 5\,432$ $\Big| \Rightarrow a > b$

   R: a

3. $34 = 100010_{(2)}$



4. $\mathcal{U}_{15} > 47$

   $15 \cdot 4 = 60$ sau $15 \cdot 5 = 75$ sau $15 \cdot 6 = 90$

   R : 60 sau 75 sau 90

5. $11 - 7^{35} : 7^{34} = 11 - 7^{35-34} = 11 - 7 = 4$

6. $a \cdot x = 148$
   $a \cdot y = 97$
   $a \cdot (x+y) = a \cdot x + a \cdot y = 148 + 97 = 245$

## Subiectul al II-lea

7. $a + b = 10$
   $b + c = 20$
   $2a + 5b + 3c = 2a + 2b + 3b + 3c = 2 \cdot (a+b) + 3 \cdot (b+c) =$
   $= 2 \cdot 10 + 3 \cdot 20 = 20 + 60 = 80$

8. $\overline{32ab} : 5 \Rightarrow b = \{0, 5\}$

$a = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$2 \times 10 = 20$ de numere (deoarece pentru $b=0$ avem 10 numere, iar pentru $b=5$ avem 10 numere)

R: 20 de numere

9. $4^{14} - (6 \cdot 4^{13} - 2 \cdot 2^{26}) = 4^{14} - [2 \cdot 3 \cdot 4^{13} - 2 \cdot (2^2)^{13}] =$

$= 4^{14} - (2 \cdot 3 \cdot 4^{13} - 2 \cdot 4^{13}) = 4^{14} - 2 \cdot 4^{13} \cdot (3-1) =$

$= 4^{14} - 2 \cdot 4^{13} \cdot 2 = 4^{14} - 4 \cdot 4^{13} = 4^{14} - 4^{1+13} =$

$= 4^{14} - 4^{14} = 0$

Subiectul al III-lea

10. $\overline{abc} : 38 = \text{cât } \hat{r} = 7 \Rightarrow$ câtul $= \{3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26\}$

$\overline{abc} = 38 \cdot \text{cât} + 7$

$\overline{abc} = 38 \cdot 3 + 7 \Rightarrow \overline{abc} = 114 + 7 = 121$

$\overline{abc} = 38 \cdot 4 + 7 \Rightarrow \overline{abc} = 152 + 7 = 159$

$\overline{abc} = 38 \cdot 5 + 7 \Rightarrow \overline{abc} = 190 + 7 = 197$

$\overline{abc} = 38 \cdot 6 + 7 \Rightarrow \overline{abc} = 168 + 7 = 173$

$\overline{abc} = 38 \cdot 7 + 7 \Rightarrow \overline{abc} = 266 + 7 = 273$

$\overline{abc} = 38 \cdot 8 + 7 \Rightarrow \overline{abc} = 304 + 7 = 311$

$\overline{abc} = 38 \cdot 9 + 7 \Rightarrow \overline{abc} = 342 + 7 = 349$

$\overline{abc} = 38 \cdot 10 + 7 \Rightarrow \overline{abc} = 380 + 7 = 387$

$\overline{abc} = 38 \cdot 11 + 7 \Rightarrow \overline{abc} = 418 + 7 = 425$

$\overline{abc} = 38 \cdot 12 + 7 \Rightarrow \overline{abc} = 452 + 7 = 459$

$\overline{abc} = 38 \cdot 13 + 7 \Rightarrow \overline{abc} = 490 + 7 = 497$

$\overline{abc} = 38 \cdot 14 + 7 \Rightarrow \overline{abc} = 528 + 7 = 535$