

BAREM DE CORECTARE

clasa a V^a

I

1	2	3	4	5	6	7	8	9	10
C	E	C	B	D	C	D	A	C	B

50p.

II 11. $T + M + F + F_i = 101$ - - - - - 2p

$M + 10 = F + 10 + F_i + 10 - 2$ 2p

$M = F + F_i + 8 \Rightarrow F + F_i = M - 8$ - - - - - 2p

$T = M + 4$ - - - - - 2p

$M + 4 + M + M - 8 = 101$ } 6p

$3M = 105$

$M = 35 \text{ ani}$

$T = 39 \text{ ani}$

$F + F_i = 27$

$F = F_i + 3$

$2F_i = 24 \Rightarrow F_i = 12 \text{ ani}$

$F = 15 \text{ ani}$

6p

20p

12. a) $2 \cdot (11a + 11b) + 3^c = 115$ - - - - - 2p

$22 \cdot (a+b) + 3^c = 115$ - - - - - 1p

$c=0 \Rightarrow 22 \cdot (a+b) = 114$ - - - - - 1p

$a+b = 114 : 22 \notin \mathbb{N}$

$c=1 \Rightarrow 22 \cdot (a+b) = 112$ - - - - - 1p

$a+b = 112 : 22 \notin \mathbb{N}$

$c=2 \Rightarrow 22 \cdot (a+b) = 106$ - - - - - 1p

$a+b = 106 : 22 \notin \mathbb{N}$

$c=3 \Rightarrow 22 \cdot (a+b) = 88 \Rightarrow a+b = 4$ 1p

$a, b, c \in \{1, 3, 3\}$ 2p

$c=4 \Rightarrow 22 \cdot (a+b) = 34$ } 1p

$a+b = 34 : 22 \notin \mathbb{N}$

$c > 5 \Rightarrow 3^c > 115$

10p

$$12 \text{ b) } 749 : a = x \text{ rest } 2b-8, \quad 2b-8 < a \quad \dots \quad 1p$$

$$749 : b = y \text{ rest } a, \quad a < b \quad \dots \quad 1p.$$

$$\begin{matrix} 2b-8 < a \\ a < b \end{matrix} \quad | \Rightarrow \quad 2b-8 < b \Rightarrow b < 8 \quad \dots \quad 2p.$$

$$\text{dac} \quad 2b-8 \geq 0 \Rightarrow b \in \{4, 5, 6, 7\} \quad \dots \quad 1p.$$

$$\text{dac} \quad \underline{b=4} \Rightarrow 749 : 4 = 187 \text{ rest } 1 \Rightarrow a=1 \quad \dots \quad 1p.$$

$$749 : 1 = 749 \text{ rest } 0 = 2 \cdot 4 - 8$$

$$b=5 \Rightarrow 749 : 5 = 149 \text{ r. } 4 \Rightarrow a=4 \quad \dots \quad 1p$$

$$749 : 4 = 187 \text{ rest } 1 \neq 2 \cdot 5 - 8$$

$$\underline{b=6} \Rightarrow 749 : 6 = 124 \text{ rest } 5 \Rightarrow a=5 \quad \dots \quad 1p$$

$$749 : 5 = 149 \text{ rest } 4 \Rightarrow 4 = 2 \cdot 6 - 8 \quad \dots \quad 1p$$

$$b=7 \Rightarrow 749 : 7 = 107 \text{ rest } 0 \Rightarrow a=0 \text{ imposibil} \quad \dots \quad 1p$$

$$\Rightarrow (a, b) \in \{(1, 4); (5, 6)\} \quad \dots \quad 1p.$$

10p

10p din oficiu