

$$3. a) a : 32 = 36 \text{ r } 28$$

$$a = 36 \cdot 32 + 28$$

$$a = 1152 + 28$$

$$a = 1180$$

$$b) a : 49 = 29 \text{ r } 7$$

$$a = 49 \cdot 29 + 7$$

$$a = 1421 + 7$$

$$a = 1428$$

$$4. a) a : 6 = 13 \Rightarrow a = 13 \times 6 \Rightarrow a = 78$$

$$b : 6 = 13 \text{ r } 1 \Rightarrow b = 13 \times 6 + 1 \Rightarrow b = 78 + 1 \Rightarrow b = 79$$

$$c : 6 = 13 \text{ r } 2 \Rightarrow c = 13 \cdot 6 + 2 \Rightarrow c = 78 + 2 \Rightarrow c = 80$$

$$d : 6 = 13 \text{ r } 3 \Rightarrow d = 13 \cdot 6 + 3 \Rightarrow d = 78 + 3 \Rightarrow d = 81$$

$$e : 6 = 13 \text{ r } 4 \Rightarrow e = 13 \cdot 6 + 4 \Rightarrow e = 78 + 4 \Rightarrow e = 82$$

$$f : 6 = 13 \text{ r } 5 \Rightarrow f = 13 \cdot 6 + 5 \Rightarrow f = 78 + 5 \Rightarrow f = 83$$

$0 \leq r < c$  ( $r = \text{restul}$ ,  $c = \text{c\u00e2tul \u00e2mp\u00e2rtirii}$ )

$$b) a : 8 = 5 \Rightarrow a = 8 \cdot 5 \Rightarrow a = 40$$

$$b : 8 = 5 \text{ r } 1 \Rightarrow b = 8 \cdot 5 + 1 \Rightarrow b = 40 + 1 = 41$$

$$c : 8 = 5 \text{ r } 2 \Rightarrow c = 8 \cdot 5 + 2 \Rightarrow c = 40 + 2 = 42$$

$$d : 8 = 5 \text{ r } 3 \Rightarrow d = 8 \cdot 5 + 3 \Rightarrow d = 40 + 3 = 43$$

$$e : 8 = 5 \text{ r } 4 \Rightarrow e = 8 \cdot 5 + 4 \Rightarrow e = 40 + 4 = 44$$

$$f : 8 = 5 \text{ r } 5 \Rightarrow f = 8 \cdot 5 + 5 \Rightarrow f = 40 + 5 = 45$$

$$g : 8 = 5 \text{ r } 6 \Rightarrow g = 8 \cdot 5 + 6 \Rightarrow g = 40 + 6 = 46$$

$$h : 8 = 5 \text{ r } 7 \Rightarrow h = 8 \cdot 5 + 7 \Rightarrow h = 40 + 7 = 47$$

$$S = 40 + 41 + 42 + 43 + 44 + 45 + 46 + 47 = (40 + 47) \cdot 7 : 2 = 87 \cdot 7 : 2 = 87 \cdot 4$$

$$47 - 40 + 1 = 7 + 1 = 8 \text{ (numere / termeni)}$$

$$S = 348$$

c)  $10 : 7 = 1 \text{ r } 3$   
 $11 : 7 = 1 \text{ r } 4$   
 $12 : 7 = 1 \text{ r } 5$   
 $13 : 7 = 1 \text{ r } 6$   
 $14 : 7 = 2$   
 $15 : 7 = 2 \text{ r } 1$   
 $16 : 7 = 2 \text{ r } 2$   
 $17 : 7 = 2 \text{ r } 3$   
 $18 : 7 = 2 \text{ r } 4$   
 $19 : 7 = 2 \text{ r } 5$   
 $20 : 7 = 2 \text{ r } 6$   
 $21 : 7 = 3$   
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$98 : 7 = 14$

$99 : 7 = 14 \text{ r } 1$

• de la 15  $\rightarrow$  20 arrem  $r = \{1, 2, 3, 4, 5, 6\}$   
 22  $\rightarrow$  27 arrem  $r = \{1, 2, 3, 4, 5, 6\}$   
 29  $\rightarrow$  34  $r = \{1, 2, 3, 4, 5, 6\}$   
 36  $\rightarrow$  41  $r = \{1, 2, 3, 4, 5, 6\}$   
 43  $\rightarrow$  48  $r = \{1, 2, 3, 4, 5, 6\}$   
 50  $\rightarrow$  55  $r = \{1, 2, 3, 4, 5, 6\}$   
 57  $\rightarrow$  62  $r = \{1, 2, 3, 4, 5, 6\}$   
 64  $\rightarrow$  69  $r = \{1, 2, 3, 4, 5, 6\}$   
 71  $\rightarrow$  76  $r = \{1, 2, 3, 4, 5, 6\}$   
 78  $\rightarrow$  83  $r = \{1, 2, 3, 4, 5, 6\}$   
 85  $\rightarrow$  90  $r = \{1, 2, 3, 4, 5, 6\}$   
 92  $\rightarrow$  97  $r = \{1, 2, 3, 4, 5, 6\}$   
 99 arrem  $r = 1$

• La nr. 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91  
 restul este 0.

$\Rightarrow S_{resturilor} = (3+4+5+6) + \underbrace{(1+2+3+4+5+6) + \dots + (1+2+3+4+5+6)}_{12 \text{ ori}} + 1 =$

$= (3+4+5+6) + 12 \cdot (1+2+3+4+5+6) + 1 = 18 + 12 \cdot (1+6) \cdot 6 : 2 + 1 =$   
 $= 19 + 12 \cdot 7 \cdot 3 = 19 + 84 \cdot 3 = 19 + 252 = 271$

5.  $a + b + c = 135$

$a : c = 12 \text{ r } 1 \Rightarrow a = 12 \cdot c + 1$

$b : c = 31 \text{ r } 2 \Rightarrow b = 31 \cdot c + 2$

$a + b + c = 135 \Rightarrow 12c + 1 + 31c + 2 + c = 135$

$44c + 3 = 135$

$44c = 135 - 3$

$44c = 132$

$c = 132 : 44$

$c = 3$

$a = 12 \cdot c + 1 = 12 \cdot 3 + 1 = 36 + 1 = 37$

$b = 31 \cdot c + 2 = 31 \cdot 3 + 2 = 93 + 2 = 95$

R: 3, 37, 95