

Guía de ejercicios - Curso 1.

II) 1b.1) a) Si el siguiente número natural n es 24, $n = 23$

b) $n + 3 = 5$

$n = 2 \rightarrow$ es el siguiente a n que genera cero, por lo que $n = 1$

c) Entre 20 y 35, existen 14 números naturales.

d) Desde el 35 al 20, existen 16 números.

III) 1e1a) 1) $325 \rightarrow$ compuesto = $5^2 \cdot 13$

2) $87 \rightarrow$ compuesto = $29 \cdot 3$

3) $120 \rightarrow$ compuesto = $2^3 \cdot 5 \cdot 3$

4) $1231 \rightarrow$ primo = 1231

IV) 1f1.1)

b) $-\{5 - (-4) + (-1) - (3 + 2)\}$

$-\{5 + 4 - 1 - 3 - 2\}$

$-\{3\} = \boxed{-3}$

c) $(-8) + [7 - (-10)] - \{(-5) + [(-8) - (-9)]\}$

$(-8) + 17 - \{(-5) + 1\}$

$9 + 4 = \boxed{13}$

d) $16 + (15 - 2) + (7 - 3) + 3$

$16 + 13 + 4 + 3 = \boxed{36}$

e) $30 - [4 + (12 - 4) - 3(10 - 3)]$

$30 - [4 + 8 - 30 + 9]$

$30 + 9 = \boxed{39}$

f) $40 + (23 - 7) + [7 + (5 - 3)(-4)]$

$40 + 16 + [7 - 20 + 12]$

$40 + 16 - 1 = \boxed{55}$

$$g) [5(4-2) + 20:(4+1) + 1] \div 5$$

$$[20 - 10 + 20 \div 5 + 1] \div 5$$

$$[15] \div 5 = \boxed{3}$$

$$h) 60 - \{ [5(6-3) + (8-2) \times 3] \cdot 2 \}$$

$$60 - \{ [30 - 15 + \frac{28}{8}] \cdot 2 \}$$

$$60 - \{ 17 \cdot 2 \}$$

$$60 - 34 = \boxed{26}$$

$$i) \{ [18 - 6 - 2(8-4) + 3(5-2) + 2] \div 3 \} \cdot 2$$

$$\{ [18 - 6 - 16 + 8 + 15 - 6 + 2] \div 3 \} \cdot 2$$

$$\{ \frac{15}{3} \} \cdot 2 = 5 \cdot 2 = \boxed{10}$$

$$k) [(-5) + 2 - (-3)] : [(-4) + (-5)]$$

$$[0] \div [-9] = \boxed{0}$$

$$l) (-32) \div \{ (8) \cdot [(+3) \div (+4)] \} \cdot 9$$

$$-32 \div \{ \frac{24}{4} \} \cdot 9$$

$$-32 \div \frac{16}{3} \cdot 9 = -\frac{16}{3} \cdot 9 = -\frac{144}{3} = \boxed{-48}$$

$$m) \{ [(-3) \cdot 4] \div [(-12) \div 10] \} \div \{ [(-5) \div (+12)] \cdot [3 \cdot (-4)] \}$$

$$\{ \frac{(-12) \cdot 4}{(-12)} \} \div \frac{15}{12} \cdot (-12)$$

$$1 \cdot \frac{10}{1} = \frac{10}{1} \div 5 = \boxed{2}$$

$$n) (3^2 - 2^2) \div \{ (3+2)^2 + [(-5)^2 - 5^2] \div 12 + 10 \cdot (-2) \}$$

$$(9 - 4) \div \{ 5^2 + [25 - 25] \div 12 + (-20) \}$$

$$5 \div \{ 25 + 0 \div 12 - 20 \}$$

$$5 \div \{ 25 + 20 \}$$

$$5 \div 5 = \boxed{1}$$

$\text{If } 1.2) \quad b) \begin{array}{c} 14 \\ 7 \end{array} \begin{array}{c} 14 \\ 7 \end{array} \begin{array}{c} 2 \\ 2 \end{array} \rightarrow 2 \cdot 7 = 14 \quad d) \begin{array}{c} 54 \\ 27 \\ 9 \\ 3 \end{array} \begin{array}{c} 54 \\ 27 \\ 9 \\ 3 \end{array} \begin{array}{c} 2 \\ 2 \\ 2 \\ 2 \end{array} \rightarrow 2 \cdot 3^3 = 54$

$c) \begin{array}{c} 18 \\ 9 \\ 3 \\ 1 \end{array} \begin{array}{c} 18 \\ 9 \\ 3 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 2 \\ 2 \end{array} \rightarrow 2 \cdot 3^2 = 18$

$e) \begin{array}{c} 60 \\ 30 \\ 15 \\ 5 \\ 1 \end{array} \begin{array}{c} 60 \\ 30 \\ 15 \\ 5 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 2 \\ 2 \\ 2 \end{array} \rightarrow 2^2 \cdot 3 \cdot 5$

$\text{If } 1.3) \quad b) 374, 60 \text{ y } 126$

$\begin{array}{c} 374 \\ 187 \\ 17 \\ 1 \end{array} \begin{array}{c} 2 \\ 11 \\ 17 \\ 1 \end{array} \quad \begin{array}{c} 60 \\ 30 \\ 15 \\ 3 \\ 5 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 3 \\ 3 \\ 5 \\ 1 \end{array} \quad \begin{array}{c} 126 \\ 63 \\ 21 \\ 7 \\ 1 \end{array} \begin{array}{c} 2 \\ 3 \\ 3 \\ 7 \\ 1 \end{array}$

$\text{mcm} = 2^2 \cdot 11 \cdot 17 \cdot 3^2 \cdot 5 \cdot 7 = 235620$

$\text{mcd} = 2$

$374 = 2 \cdot 11 \cdot 17$

$126 = 2 \cdot 3^2 \cdot 7$

$60 = 2^2 \cdot 3 \cdot 5$

$c) 18, 60 \text{ y } 126$

$\begin{array}{c} 18 \\ 9 \\ 3 \\ 1 \end{array} \begin{array}{c} 2 \\ 3 \\ 3 \\ 1 \end{array} \quad \begin{array}{c} 60 \\ 30 \\ 15 \\ 3 \\ 5 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 3 \\ 3 \\ 5 \\ 1 \end{array} \quad \begin{array}{c} 126 \\ 63 \\ 21 \\ 7 \\ 1 \end{array} \begin{array}{c} 2 \\ 3 \\ 3 \\ 7 \\ 1 \end{array}$

$\text{mcm} = 2^2 \cdot 3^2 \cdot 5 \cdot 7 = 1260$

$\text{mcd} = (2 \times 3) = 6$

$18 = 2 \cdot 3^2$

$d) 24, 96, 28 \text{ y } 27$

$\begin{array}{c} 24 \\ 12 \\ 6 \\ 3 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 2 \\ 3 \\ 1 \end{array} \quad \begin{array}{c} 96 \\ 48 \\ 24 \\ 12 \\ 6 \\ 3 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 3 \\ 1 \end{array} \quad \begin{array}{c} 28 \\ 14 \\ 7 \\ 1 \end{array} \begin{array}{c} 2 \\ 2 \\ 7 \\ 1 \end{array} \quad \begin{array}{c} 27 \\ 9 \\ 3 \\ 1 \end{array} \begin{array}{c} 3 \\ 3 \\ 3 \\ 1 \end{array}$

$\text{mcm} = 2^5 \cdot 3^3 \cdot 7 = 6048$

$\text{mcd} = 1$

