

$$\textcircled{1} \quad 37 \text{€} \xrightarrow{-40\%} X \xrightarrow[\text{IVA}]{+4\%} Y$$

$$\frac{37 \cdot 40}{100} = 14'8 \text{€} \quad \frac{14'8 \cdot 104}{100} = 15'39 \text{€}$$

$$\textcircled{2} \quad \text{Agosto} \xrightarrow{-25\%} \text{Octubre} \xrightarrow{-15\%} \text{Diciembre}$$

$$90 \text{€} \longrightarrow X \longrightarrow Y$$

$$\frac{90 \cdot 0'75}{100} = 67'5 \text{€} \quad \frac{67'5 \cdot 85}{100} = 57'37 \text{€}$$

$$(100 - 25 = 75) \quad (100 - 15 = 85)$$

$$X \longrightarrow Y \longrightarrow 60 \text{€}$$

$$60 \xrightarrow{85\%} Y \quad Y = \frac{60 \cdot 100}{85} = 70'59 \text{€}$$

$$Y \xrightarrow{100\%}$$

$$70'59 \text{€} \xrightarrow{75\%} X \quad X = \frac{70'59 \cdot 100}{75} = 94'12 \text{€}$$

$$X \xrightarrow{100\%}$$

$$\textcircled{3} \quad \begin{array}{l} 2000 \text{€} \\ 5\% \text{ anual} \\ 6 \text{ años} \end{array} \quad C = C_0 \left(1 + \frac{r}{100}\right)^t$$

$$C = 2000 \left(1 + \frac{5}{100}\right)^6 = 2680'2 \text{€}$$

$$\begin{array}{l} 2000 \text{€} \\ 5\% \text{ anual} \\ 4 \text{ meses} = \frac{4}{12} = 0'33 \text{ años} \end{array} \quad C = 2000 \left(1 + \frac{5}{100}\right)^{0'33} = 2032'5 \text{€}$$

$$\textcircled{4} \quad a_m = \frac{m^2}{m} + \frac{m}{2}$$

$$a_1 = \frac{1^2}{1} + \frac{1}{2} = 1 + \frac{1}{2} = \frac{3}{2}$$

$$a_2 = \frac{2^2}{2} + \frac{2}{2} = \frac{4}{2} + \frac{2}{2} = \frac{6}{2} = 3$$

$$a_3 = \frac{3^2}{3} + \frac{3}{2} = \frac{9}{3} + \frac{3}{2} = \frac{18+9}{6} = \frac{27}{6} = \frac{9}{2}$$

$$a_4 = \frac{4^2}{4} + \frac{4}{2} = \frac{16}{4} + \frac{4}{2} = \frac{16+8}{4} = \frac{24}{4} = 6$$

$$b) \quad b_m = 2 \cdot b_{m-2} - 3 \cdot b_{m-1} \quad b_1 = -1 \quad b_2 = 1$$

$$b_3 = 2 \cdot b_1 - 3 \cdot b_2 = 2 \cdot (-1) - 3 \cdot 1 = -2 - 3 = -5$$

$$b_4 = 2 \cdot b_2 - 3 \cdot b_3 = 2 \cdot 1 - 3 \cdot (-5) = 2 + 15 = 17$$

$$\textcircled{5} \quad a) \quad 35, 31, \overset{-4}{\curvearrowright} 27, 23$$

$$a_m = a_1 + (m-1) \cdot d = 35 + (m-1) \cdot (-4) = 35 - 4m + 4$$

$$a_m = 39 - 4m$$

$$a_{12} = 39 - 4 \cdot 12 = 39 - 48 = -9$$

$$S_{25} = \frac{(a_1 + a_{25}) \cdot 25}{2} = \frac{(35 - 61) \cdot 25}{2} =$$

$$a_{25} = 39 - 4 \cdot 25 = 39 - 100 = -61$$