

① Enero $\xrightarrow{-30\%}$ Abril $\xrightarrow{-23\%}$ Mayo
 230 \longrightarrow 161€ \longrightarrow 123'97€
 352'43 \longrightarrow 246'7 \longrightarrow 190€

$$\frac{230 \cdot 70}{100} = 161€ \quad \frac{161 \cdot 77}{100} = 123'97€$$

(100% - 30%) (100% - 23%)

190 \longrightarrow 77%
 X \longrightarrow 100%

$$X = \frac{190 \cdot 100}{77} = 246'7€$$

246'7 \longrightarrow 70%
 Y \longrightarrow 100%

$$Y = \frac{246'7 \cdot 100}{70} = 352'43€$$

② $C = C_0 \cdot \left(1 + \frac{r}{100}\right)^n$

$C_0 = 5000$ $C = 5000 \cdot \left(1 + \frac{3'5}{100}\right)^{0'92} =$

$r = 3'5\%$

$t = 11 \text{ meses} = 0'92 \text{ años} = 4838'11€$

3

→ $a_m = 4'5; 5'2; 5'9; 6'6; \dots$ Suc aritmetica

$$a_m = a_1 + (m-1)d$$

$$a_m = 4'5 + (m-1) \cdot 0'7 = 4'5 + 0'7m - 0'7$$

$$\boxed{a_m = 3'8 + 0'7m}$$

$$a_7 = 3'8 + 0'7 \cdot 7 = 8'7$$

$$S_{13} = \frac{(a_1 + a_{13}) \cdot 13}{2} = \frac{(4'5 + 12'9) \cdot 13}{2} = \underline{\underline{113'1}}$$

$$a_{13} = 3'8 + 0'7 \cdot 13 = 12'9$$

→ $b_m = 160, 40, 10$

$$b_m = b_1 \cdot r^{m-1} = 160 \cdot 0'25^{m-1}$$

$$b_7 = 160 \cdot 0'25^{7-1} = 160 \cdot 0'25^6 = 0'039$$

$$S_{13} = \frac{b_1 (r^m - 1)}{r - 1} = \frac{160 (0'25^{13} - 1)}{(0'25 - 1)} = 213'33\dots$$

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

$$\begin{aligned} \rightarrow a_2 = 17 & \quad 17 = a_1 + (2-1)d \\ \rightarrow a_5 = 50 & \quad 50 = a_1 + (5-1)d \end{aligned} \left. \vphantom{\begin{aligned} \rightarrow a_2 = 17 \\ \rightarrow a_5 = 50 \end{aligned}} \right\} \begin{aligned} 17 &= a_1 + d \\ 50 &= a_1 + 4d \end{aligned}$$

$$\begin{aligned} -17 &= -a_1 - d \\ 50 &= a_1 + 4d \\ \hline 33 &= 3d \end{aligned} \quad \rightarrow \quad d = \frac{33}{3} = 11 \quad \boxed{d=11}$$

$$a_1 = 17 - d = 17 - 11 = 6$$

$$\boxed{a_1 = 6}$$

$$a_m = 6 + (m-1) \cdot 11 = 6 + 11m - 11 = 11m - 5$$

Término general $\boxed{a_m = 11m - 5}$

(5)

$$\begin{array}{r|rrrr} & 3 & 2 & -27 & -18 \\ 3 & & 9 & 33 & 18 \\ \hline & 3 & 11 & +6 & \boxed{0} \\ -3 & & -9 & -6 & \\ \hline & 3 & 2 & \boxed{0} & \end{array}$$

$$(x-3)(x+3)(3x^2+2)$$

$$\begin{array}{r|rrrr} & 1 & -4 & 4 & -16 \\ 4 & & 4 & 0 & 16 \\ \hline & 1 & 0 & 4 & \boxed{0} \end{array}$$

⑥

$$(xy^2 - 3x)^2 = x^2y^4 + 9x^2 - 6x^2y^2$$

$$(ab^2 + c^3)^2 = a^2b^4 + c^6 + 2ab^2c^3$$

$$(ay - b)(ay + b) = a^2y^2 - b^2$$

⑦

$$3x^4 - 2x^2 + 5x - 2$$

$$x^2 - 8x + 3$$

$$3x^4 - x^2 - 3x + 1$$

$$3x^4 - 2x^2 + 5x - 2$$

$$-x^2 + 8x - 3$$

$$3x^4 - 3x^2 + 13x - 5$$

$$3x^4 - 2x^2 + 5x - 2$$

$$x^2 - 8x + 3$$

$$\begin{array}{r}
 3x^6 \\
 - 24x^5 + 9x^4 - 6x^2 + 15x - 6 \\
 - 2x^4 + 5x^3 - 2x^2 \\
 \hline
 3x^6 - 24x^5 + 7x^4 + 21x^3 - 48x^2 + 31x - 6
 \end{array}$$

$$\begin{array}{r}
 3x^4 + 0x^3 - 2x^2 + 5x - 2 \\
 - 3x^4 + 24x^3 - 9x^2 \\
 \hline
 + 24x^3 - 11x^2 + 5x
 \end{array}$$

$$\begin{array}{r}
 + 24x^3 - 11x^2 + 5x \\
 - 24x^3 + 192x^2 - 72x \\
 \hline
 + 181x^2 - 67x - 2
 \end{array}$$

$$\begin{array}{r}
 + 181x^2 - 67x - 2 \\
 - 181x^2 + 1448x - 543 \\
 \hline
 1381x - 545
 \end{array}$$

$$x^2 - 8x + 3$$

$$3x^2 + 24x + 181$$

$$1381x - 545$$