

Parcial 1

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1

$$(1 + i_1)^{m_1} = (1 + i_2)^{m_2}$$

$$(1 + 0.18)^1 = (1 + i_2)^{12}$$

$$(1 + 0.18)^{1/12} = 1 + i_2$$

$$(1 + 0.18)^{1/12} - 1 = i_2$$

$$(1 + 0.18)^{1/12} - 1 = i_2$$

$$(1.18)^{1/12} - 1 = i_2$$

$$(1.013) - 1 = i_2$$

$$0.013 = i_2$$

$$\rightarrow F_6 = 20000000(1 + 0.013)^6$$

$$F_6 = 21611587.41$$

→ a F_6 le restamos el primer pago y nos quedaría:

$$F_6 = 21611587.41 - 5000000$$

$$F_6 = 16611587.41$$

$$\rightarrow F_6 = 16611587.41(1 + 0.013)^6$$

$$F_6 = 17950138.67$$

→ a F_6 le restamos el segundo pago y nos quedaría:

$$F_6 = 17950138.67 - 7000000$$

$$F_6 = 10950138.67$$

$$15500000 = 10950138.67(1 + 0.013 * n)$$

$$n = 31.9 \text{ meses}$$

2

$$i = \frac{J}{m}$$

$$\rightarrow 17\% N.M.$$

$$i = \frac{17}{12} = 1.4166666 \text{ E.M.}$$

$$1.417 \text{ } E.M.$$

$$\rightarrow 21\% \text{ } N.S.$$

$$i = \frac{21}{2} = 10.5 \text{ } E.S.$$

$$10.5\% \text{ } E.S$$

$$(1 + 0.105)^2 = (1 + i)^{12}$$

$$(1.105)^2 = (1 + i)^{12}$$

$$1.221 = (1 + i)^{12}$$

$$\sqrt[12]{1.221} = 1 + i$$

$$\sqrt[12]{1.221} - 1 = i$$

$$i = 0.01678$$

$$1.678\% \text{ } E.M.$$

$$\rightarrow P_0 = 1800000$$

$$\rightarrow P_3 = \frac{300000}{(1 + 0.01417)^3}$$

$$P_3 = 287600.0624$$

$$\rightarrow P_7 = \frac{500000}{(1 + 0.01678)^1}$$

$$P_7 = 491748.4608$$

$$\rightarrow P_{12} = \frac{800000}{(1 + 0.01678)^6}$$

$$P_{12} = 723982.4131$$

$$\rightarrow P_{15} = \frac{1200000}{(1 + 0.01678)^9}$$

$$P_{15} = 1033090.315$$

$$\rightarrow F_6 = P_7 + P_{12} + P_{15}$$

$$F_6 = 491748.4608 + 723982.4131 + 1033090.315$$

$$F_6 = 2248857.189$$

$$\rightarrow P_6 = \frac{2248857.189}{(1 + 0.01417)^6}$$

$$P_6 = 2066794.605$$

$$\rightarrow P = P_0 + P_3 + P_6$$

$$P = 1800000 + 287600.0624 + 2066794.605$$

$$P = 4154394.667$$

→ Valor de contado.

$$P_{contado} = P - 25\%$$

$$P_{contado} = 4154394.667 - (4154394.667 \times 0.25)$$

$$P_{contado} = 3115796$$

El valor del artículo de tecnología es de \$4'154'394.667, ahora bien, si se quiere comprar de contado, este recibirá un descuento del 25%, por lo que quedaría con un valor de \$3'115'796