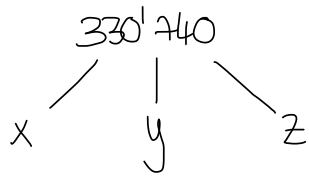


Ex 2.20



Soit x la 1^e part (4%)

y " 2^e " (5%)

z " 3^e " (6%)

$$x + y + z = 330'740$$

$$x + \frac{x}{25} = y + \frac{y}{20} = z + \frac{3z}{50}$$

après 1 année

$$1^{\text{e}} \text{ part} : x + x \cdot \frac{4}{100} = x + \frac{4x}{100} = x + \frac{x}{25}$$

$$2^{\text{e}} \text{ part} : y + y \cdot \frac{5}{100} = y + \frac{5y}{100} = y + \frac{y}{20}$$

$$3^{\text{e}} \text{ part} : z + z \cdot \frac{6}{100} = z + \frac{3z}{50}$$

$$\Rightarrow \begin{cases} x + y + z = 330'740 \\ x + \frac{x}{25} = y + \frac{y}{20} & | \cdot 100 \\ x + \frac{x}{25} = z + \frac{3z}{50} & | \cdot 50 \end{cases} \Leftrightarrow \begin{cases} \dots \\ 100x + 4x = 100y + 5y \\ 50x + 2x = 50z + 3z \end{cases}$$

$$\Rightarrow \begin{cases} x + y + z = 330'740 & | \cdot 105 \\ 104x - 105y = 0 & | \cdot 1 \\ 52x - 53z = 0 \end{cases} \Rightarrow 209x + 105z = 34727700$$

$$\Rightarrow \begin{cases} 209x + 105z = 34727700 & | \cdot 53 \\ 52x - 53z = 0 & | \cdot 105 \end{cases}$$

$$\Rightarrow 16'537x = 1840568'100$$

$$x = \underline{111'300.-}$$

$$z = \frac{52x}{53} = \underline{109'200.-}$$

$$y = 330'740 - x - z = \underline{110'240.-}$$