

EXERCÍCIO MABE3421:

"achimages.com"

x = "precio de plataneras Cavendish"

y = "precio de Gros-Michel"

z = "Precio de Gran-Euana"

Sistema de ecuaciones:

(precio medio = 9€)

$$\begin{array}{lcl} (1) & \frac{x + y + z}{3} = 9 & \\ (2) & 30x + 20y + 10z = 560 & \\ (3) & 20x + 25z = 310 & \end{array} \left\{ \begin{array}{ccc|c} 1 & 1 & 1 & 27 \\ 30 & 20 & 10 & 560 \\ 20 & 0 & 25 & 310 \end{array} \right.$$

$\underbrace{\hspace{10em}}_A$

a) CRAMER (x):

$$x = \frac{|A_x|}{|A|} = \frac{\begin{vmatrix} 27 & 1 & 1 \\ 560 & 20 & 10 \\ 310 & 0 & 25 \end{vmatrix}}{\begin{vmatrix} 1 & 1 & 1 \\ 30 & 20 & 10 \\ 20 & 0 & 25 \end{vmatrix}} = \dots = \frac{-3600}{-450} = 8$$

$x=8$

b) Res de incógnita (y, z):

De (3) $\Rightarrow 20x + 25z = 310$

$$20 \cdot 8 + 25z = 310$$

$$160 + 25z = 310$$

$$25z = 310 - 160$$

$$25z = 150 \Rightarrow z = \frac{150}{25} = 6 \Rightarrow \boxed{z=6}$$

De (1) $\Rightarrow x + y + z = 27$

$$8 + y + 6 = 27 \Rightarrow y = 27 - 8 - 6 \Rightarrow \boxed{y=13}$$

Solución: Cavendish (8); Gros-Michel (13); Gran-Euana (6)