

Repaso Exame

$$1. \frac{x+4}{3} - \frac{x-4}{5} = 2 + \frac{3x-1}{15}$$

$$\frac{5x+20}{15} - \frac{3x-12}{15} = \frac{30}{15} + \frac{3x-1}{15}$$

$$5x+20 - 3x+12 = 30 + 3x-1$$

$$5x - 3x - 3x = 30 - 1 - 20 - 12$$

$$-x = -3$$

$$x = 3$$

$$2. \frac{(2x-1)(2x+1)}{3} = \frac{3x-2}{6} + \frac{x^2}{3}$$

$$\frac{4x^2-1}{3} = \frac{3x-2}{6} + \frac{x^2}{3}$$

$$\frac{8x^2-2}{6} = \frac{3x-2}{6} + \frac{2x^2}{6}$$

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

$$8x^2-2x^2-3x-2+2=0$$

$$6x^2-3x=0$$

$$x \cdot (6x-3) = 0 \quad \left\{ \begin{array}{l} x=0 \\ 6x-3=0 \Rightarrow 6x=3 \Rightarrow x=\frac{3}{6}=\frac{1}{2} \end{array} \right.$$

$$4. \begin{cases} \frac{5x+3}{6} + \frac{y-1}{4} = 2 \Rightarrow \frac{10x+6}{12} + \frac{3y-3}{12} = \frac{24}{12} \Rightarrow 10x+3y = 21 \\ \frac{x-2}{5} - \frac{y+5}{10} = 0 \Rightarrow \frac{2x-4}{10} - \frac{y+5}{10} = \frac{0}{10} \Rightarrow 2x-y = 9 \end{cases}$$

$$\begin{cases} 10x+3y = 21 \\ 2x-y = 9 \end{cases} \xrightarrow{\cdot(-5)} \begin{cases} 10x+3y = 21 \\ -10x+5y = -45 \end{cases}$$

$$8y = -24$$

$$y = \frac{-24}{8} = -3$$

$$\text{Solución } \begin{cases} x = 3 \\ y = -3 \end{cases}$$

$$10x + 3 \cdot (-3) = 21$$

$$10x - 9 = 21$$

$$10x = 30$$

$$x = 3$$

6.

	Aceite caro	Aceite barato	Mezcla
Cantidad (l)	x	6-x	6
Precio (€/l)	1'1	0'8	0'9

$$1'1 \cdot x + 0'8(6-x) = 6 \cdot 0'9$$

$$1'1x + 4'8 - 0'8x = 5'4$$

$$0'3x = 0'6$$

$$x = 2$$

Debemos mezclar 2 l de aceite caro con 4 l de aceite barato

17.

x: n° de pizzas "Margarita"

y: n° de pizzas "Marinera"

$$\begin{cases} x+y = 45 \rightarrow x = 45-y \\ 6x+4y = 226 \end{cases}$$

$$x = 45-22$$

$$x = 23$$

$$6 \cdot (45-y) + 4y = 226$$

$$270 - 6y + 4y = 226$$

$$-2y = -44$$

$$y = 22$$

Se vendieron 22 pizzas Margarita y 23 pizzas Marinera.