

Ficha 8.5

$$(1) \begin{cases} 3x - y = -6 \\ -x - 3y = -28 \end{cases} \quad \begin{array}{l} x | -3 \\ y | -3 \end{array} \quad \begin{cases} 3(-3) - (-3) = -6 \checkmark \\ -(-3) - 3(-3) = -28 \text{ F} \end{cases}$$

$$\begin{array}{l} x | -1 \\ y | 10 \end{array} \quad \begin{cases} 3(-1) - 10 = -6 \text{ F} \end{cases}$$

$$\begin{array}{l} x | 1 \\ y | 9 \end{array} \quad \begin{cases} 3 \cdot 1 - 9 = -6 \checkmark \\ -1 - 3(9) = -28 \checkmark \end{cases} \quad \boxed{\text{Solución}} \\ x = 1 \\ y = 9$$

$$(2) \begin{cases} -x + 2y = 6 \\ 2x + 2y = 15 \end{cases} \quad \begin{array}{l} x | -3 \\ y | 1,5 \end{array} \quad \begin{cases} -(-3) + 2 \cdot 1,5 = 6 \checkmark \\ 2(-3) + 2 \cdot 1,5 = 15 \text{ F} \end{cases}$$

$$\begin{array}{l} x | -1 \\ y | 3,5 \end{array} \quad \begin{cases} -(-1) + 2 \cdot 3,5 = 6 \text{ F} \end{cases}$$

$$\begin{array}{l} x | 1 \\ y | 3,5 \end{array} \quad \begin{cases} -1 + 2 \cdot 3,5 = 6 \checkmark \\ 2 \cdot 1 + 2 \cdot 3,5 = 15 \text{ F} \end{cases}$$

$$\begin{array}{l} x | 3 \\ y | 4,5 \end{array} \quad \begin{cases} -3 + 2 \cdot 4,5 = 6 \checkmark \\ 2(3) + 2 \cdot 4,5 = 15 \checkmark \end{cases} \quad \boxed{\text{Soluc.}} \\ x = 3 \\ y = 4,5$$

$$(3) \begin{cases} x - 8y = 12 \\ 5x + 8y = 16 \end{cases} \quad \begin{array}{l} y = \frac{x-12}{8} \\ y = \frac{16-5x}{8} \end{array} \quad y = \frac{x-2}{8}$$

$$\begin{array}{l} x | -3 -1 1 3 5 \\ y | \frac{-15}{8} \frac{-13}{8} \frac{-11}{8} \frac{-7}{8} \end{array}$$

$$\begin{array}{l} x | -3 -1 1 3 5 \\ y | \frac{-5}{8} \frac{-3}{8} \frac{-1}{8} \frac{1}{8} \end{array}$$

$$\begin{array}{l} x | -3 -1 1 3 5 \\ y | \frac{31}{8} \frac{21}{8} \frac{11}{8} \frac{1}{8} \end{array}$$

$$\boxed{\text{Solución}} \\ x = 3 \\ y = 1/8$$

$$(4) \begin{cases} x + 3y = 42 \\ 5x - 8y = 3 \end{cases} \quad \begin{array}{l} y = \frac{42-x}{3} \\ y = \frac{5x-3}{8} \end{array}$$

$$\begin{array}{l} x | 10 15 20 25 30 \\ y | \frac{32}{3} \frac{27}{3} \frac{22}{3} \frac{17}{3} 4 \end{array}$$

$$\begin{array}{l} x | 10 15 20 25 30 \\ y | \frac{47}{8} \frac{72}{8} \frac{97}{8} \frac{122}{8} \frac{147}{8} \end{array}$$

$$\boxed{\text{Solución}} \\ x = 15 \\ y = 9$$

Ficha 8.5

$$(5) \begin{cases} 2x + 1y = 10 \rightarrow y = 10 - 2x \\ 4x + 3y = 22 \rightarrow y = \frac{22-4x}{3} \end{cases}$$

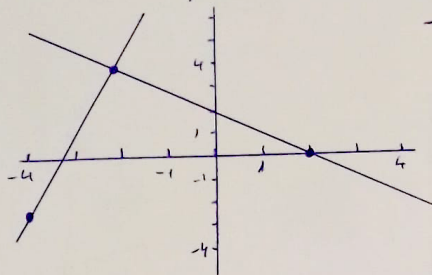
$$\begin{array}{l} x | 0 1 2 3 4 5 6 \\ y | 10 8 6 4 2 \end{array} \quad \begin{array}{l} x | 0 1 2 3 4 5 6 \\ y | \frac{22}{3} \frac{18}{3} \frac{14}{3} \frac{10}{3} \frac{6}{3} \frac{2}{3} \end{array}$$

$$\text{Solución} \\ x = 4 \\ y = 2$$

Cada entrada vale 4 €
Cada bola palomitas vale 2 €

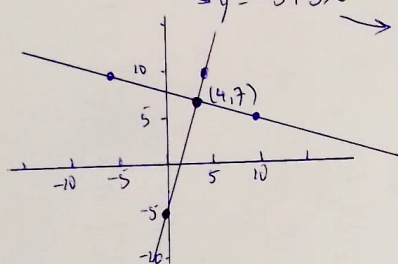
Ficha 8.6

1. $\begin{cases} x+y=2 \\ 3x+y=10 \end{cases} \rightarrow x=2-y \rightarrow \begin{array}{c|c} x & y \\ \hline 2 & 0 \\ -2 & 4 \end{array}$
 $\rightarrow y=10-3x \rightarrow \begin{array}{c|c} x & y \\ \hline -4 & -2 \\ -2 & 4 \end{array}$



Solución
 $x = -2$
 $y = 4$

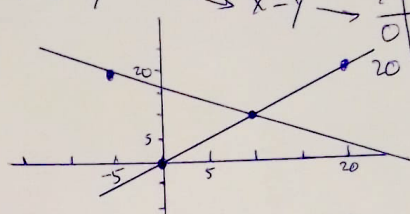
2. $\begin{cases} x+3y=25 \\ -3x+y=-5 \end{cases} \rightarrow x=25-3y \rightarrow \begin{array}{c|c} x & y \\ \hline 10 & 5 \\ -5 & 10 \end{array}$
 $\rightarrow y=-5+3x \rightarrow \begin{array}{c|c} x & y \\ \hline 0 & -5 \\ 5 & 10 \end{array}$



Solución
 $x = 4$
 $y = 7$

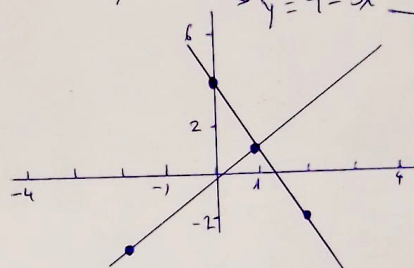
Ficha 8.6

3. $\begin{cases} 2x+3y=50 \\ x-y=0 \end{cases} \rightarrow x=\frac{50-3y}{2} \rightarrow \begin{array}{c|c} x & y \\ \hline 10 & 10 \\ -5 & 20 \end{array}$
 $\rightarrow x=y \rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 0 \\ 20 & 20 \end{array}$



Solución
 $x = 10$
 $y = 10$

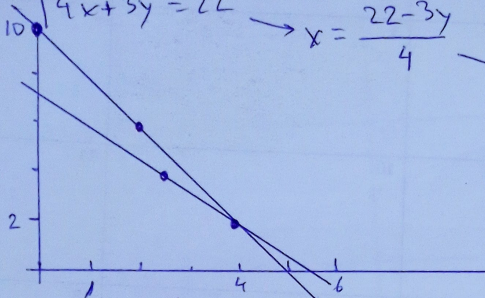
4. $\begin{cases} -4x+3y=-1 \\ 3x+y=4 \end{cases} \rightarrow y=\frac{-1+4x}{3} \rightarrow \begin{array}{c|c} x & y \\ \hline 1 & 1 \\ -2 & -3 \end{array}$
 $\rightarrow y=4-3x \rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 4 \\ 2 & -2 \end{array}$



Solución
 $x = 1$
 $y = 1$

Ficha 8.6

5. $\begin{cases} 2x+y=10 \\ 4x+3y=22 \end{cases} \rightarrow y=10-2x \rightarrow \begin{array}{c|c} x & y \\ \hline 0 & 10 \\ 2 & 6 \end{array}$
 $\rightarrow x=\frac{22-3y}{4} \rightarrow \begin{array}{c|c} x & y \\ \hline 4 & 2 \\ 3.5 & 4 \end{array}$



Solución
 $x = 4$
 $y = 2$

Entrada 4 €
 Polonitas 2 €

Ficha 7.7

$$\textcircled{1} \begin{cases} x - 8y = 2 \rightarrow x = 2 + 8y \\ 5x + 8y = 16 \rightarrow x = \frac{16 - 8y}{5} \end{cases} \Rightarrow$$

$$\begin{array}{l|l} 2 + 8y = \frac{16 - 8y}{5} & x = 2 + 8y \\ 10 + 40y = 16 - 8y & x = 2 + 8 \cdot \frac{1}{8} \\ 48y - 8y = 6 & x = 2 + \frac{8}{8} \\ y = \frac{6}{48} = \frac{1}{8} & x = 2 + 1 = 3 \end{array}$$

$$\textcircled{2} \begin{cases} -x + 2y = 6 \rightarrow x = 2y - 6 \\ 2x + 2y = 15 \rightarrow x = \frac{15 - 2y}{2} \end{cases} \Rightarrow$$

$$\begin{array}{l|l} 2y - 6 = \frac{15 - 2y}{2} & x = 2y - 6 \\ 4y - 12 = 15 - 2y & x = 2 \cdot \frac{9}{2} - 6 \\ 6y = 27 & x = 9 - 6 \\ y = \frac{27}{6} = \frac{9}{2} & x = 3 \end{array}$$

$$\textcircled{3} \begin{cases} 3x - y = -6 \rightarrow y = 3x + 6 \\ -x - 3y = -28 \rightarrow y = \frac{-x + 28}{3} \end{cases}$$

$$\begin{array}{l|l} 3x + 6 = \frac{-x + 28}{3} & y = 3 \cdot 1 + 6 \\ 9x + 18 = -x + 28 & y = 9 \\ 10x = 10 & \\ x = 1 & \end{array}$$

$$\textcircled{4} \begin{cases} x + 3y = 42 \rightarrow x = 42 - 3y \\ 5x - 8y = 3 \rightarrow x = \frac{3 + 8y}{5} \end{cases}$$

$$\begin{array}{l|l} 42 - 3y = \frac{3 + 8y}{5} & x = 42 - 3 \cdot 9 \\ 210 - 15y = 3 + 8y & x = 42 - 27 \\ -23y = -207 & x = 15 \\ y = \frac{-207}{-23} = 9 & \end{array}$$

Ficha 8.7

$$\textcircled{5} \begin{cases} x + y = 55 \rightarrow x = 55 - y \\ 2x + 3y = 125 \rightarrow x = \frac{125 - 3y}{2} \end{cases}$$

$$\begin{array}{l|l} 55 - y = \frac{125 - 3y}{2} & x = 55 - 15 \\ 110 - 2y = 125 - 3y & x = 40 \\ y = 15 & x = 40 \end{array}$$

40 tiros de 2 y 15 tiros de 3

$$\textcircled{6} \begin{cases} x + y = 8 \rightarrow x = 8 - y \\ 2x + 3y = 19 \rightarrow x = \frac{19 - 3y}{2} \end{cases}$$

$$\begin{array}{l|l} 8 - y = \frac{19 - 3y}{2} & x = 8 - 3 \\ 16 - 2y = 19 - 3y & x = 5 \\ y = 3 & \end{array}$$

5 botellas de 2L. y 3 bot de 3L.

Ficha 8.8.

$$(1a) \begin{cases} 2x+y=0 \\ 5x-3=9y-3 \end{cases} \quad \begin{cases} 2x+y=0 \\ 5x-9y=0 \end{cases} \quad \begin{cases} y=-2x \\ y=\frac{5x}{9} \end{cases} >$$

$$\begin{aligned} -2x &= \frac{5x}{9} \\ \frac{-18x}{9} &= \frac{5x}{9} \\ -18x &= 5x \\ -23x &= 0 \\ x &= \frac{0}{-23} \\ x &= 0 \end{aligned} \quad \begin{aligned} y &= -2 \cdot 0 \\ y &= 0 \end{aligned}$$

$$(1b) \begin{cases} 2(3x-2)=y-1 \\ 3(x+y)+2(x-y)=8 \end{cases} \quad \begin{cases} 6x-4=y-1 \\ 3x+3y+2x-2y=8 \end{cases}$$

$$\begin{cases} 6x-y=3 \\ 5x+y=8 \end{cases} \quad \begin{cases} y=6x-3 \\ y=8-5x \end{cases} >$$

$$\begin{aligned} 6x-3 &= 8-5x \\ 11x &= 11 \\ x &= 1 \end{aligned} \quad \begin{aligned} y &= 6 \cdot 1 - 3 \\ y &= 3 \end{aligned}$$

$$(1c) \begin{cases} \frac{x}{3} - \frac{y}{2} = 4 \\ \frac{x}{2} + \frac{y}{4} = 2 \end{cases} \quad \begin{cases} \frac{2x}{6} - \frac{3y}{2} = \frac{24}{6} \\ \frac{2x}{4} + \frac{y}{4} = \frac{8}{4} \end{cases}$$

$$\begin{cases} 2x-3y=24 \\ 2x+y=8 \end{cases} \quad \begin{cases} x=\frac{24+3y}{2} \\ x=\frac{8-y}{2} \end{cases}$$

$$\begin{aligned} \frac{24+3y}{2} &= \frac{8-y}{2} \\ 4y &= -16 \\ y &= -4 \end{aligned} \quad \begin{aligned} x &= \frac{24+3(-4)}{2} \\ x &= 6 \end{aligned}$$

$$(1d) \begin{cases} 3(x+1)+2(y-3)=8 \\ 4(7-2x)-(2y-5)=-3 \end{cases} \quad \begin{cases} 3x+3+2y-6=8 \\ 28-8x-2y+5=-3 \end{cases}$$

$$\begin{cases} 3x+2y=11 \\ -8x-2y=-36 \end{cases} \rightarrow \begin{cases} y=\frac{11-3x}{2} \\ y=\frac{-8x+36}{2} \end{cases}$$

$$\begin{aligned} \frac{11-3x}{2} &= \frac{-8x+36}{2} \\ 5x &= 25 \\ x &= 5 \end{aligned} \quad \begin{aligned} y &= \frac{11-3 \cdot 5}{2} \\ y &= -2 \end{aligned}$$

Ficha 8.8

$$(2a) \begin{cases} x+y=235 \\ 7x+3y=1485 \end{cases} \quad \begin{cases} y=235-x \\ y=\frac{1485-7x}{3} \end{cases}$$

$$\begin{aligned} 235-x &= \frac{1485-7x}{3} \\ 705-3x &= 1485-7x \\ 4x &= 780 \\ x &= 195 \end{aligned} \quad \begin{aligned} y &= 235-195 \\ y &= 40 \end{aligned}$$

195 entradas de adulto
40 " " niño

$$(2b) \begin{cases} x+y=50 \\ 4x-3y=116 \end{cases} \quad \begin{cases} x=50-y \\ x=\frac{116+3y}{4} \end{cases}$$

$$\begin{aligned} 50-y &= \frac{116+3y}{4} \\ 200-4y &= 116+3y \\ -7y &= -84 \\ y &= 12 \end{aligned} \quad \begin{aligned} x &= 50-y \\ x &= 50-12 \\ x &= 38 \end{aligned}$$

38 respuestas ✓
12 " X

Fecha 8.9

$$\begin{aligned} (1a) \quad & \begin{cases} x+y=3 \\ 4x-y=7 \end{cases} \rightarrow \begin{cases} x=3-y \\ 4(3-y)-y=7 \end{cases} \rightarrow \begin{cases} x=3-y \\ 12-4y-y=7 \end{cases} \rightarrow \begin{cases} x=3-y \\ -5y=-5 \end{cases} \\ & \rightarrow \begin{cases} x=3-1 \\ y=1 \end{cases} \rightarrow \boxed{x=2} \end{aligned}$$

$$\begin{aligned} (1b) \quad & \begin{cases} 2x-3y=12 \\ 3x+y=7 \end{cases} \rightarrow \begin{cases} 2x-3y=12 \\ y=7-3x \end{cases} \rightarrow \begin{cases} 2x-3(7-3x)=12 \\ y=7-3x \end{cases} \\ & \rightarrow \begin{cases} 2x-21+9x=12 \\ y=7-3x \end{cases} \rightarrow \begin{cases} 11x=33 \\ y=7-3 \cdot 3 \end{cases} \\ & \rightarrow \begin{cases} x=3 \\ y=-2 \end{cases} \end{aligned}$$

$$\begin{aligned} (1c) \quad & \begin{cases} 3x-2y=9 \\ 2x+5y=-13 \end{cases} \rightarrow \begin{cases} x=\frac{9+2y}{3} \\ 2x+5y=-13 \end{cases} \rightarrow \begin{cases} x=\frac{9+2y}{3} \\ 2\frac{9+2y}{3}+5y=-13 \end{cases} \\ & \rightarrow \begin{cases} x=\frac{9+2y}{3} \\ \frac{18+4y}{3}+5y=-13 \end{cases} \rightarrow \begin{cases} x=\frac{9+2y}{3} \\ 18+4y+15y=-39 \end{cases} \\ & \rightarrow \begin{cases} x=\frac{9+2(-3)}{3} \\ 19y=-57 \end{cases} \rightarrow \begin{cases} x=1 \\ y=-3 \end{cases} \end{aligned}$$

$$\begin{aligned} (2a) \quad & \begin{cases} 3,5x+1,5y=2,250 \\ x+y=50 \end{cases} \rightarrow \begin{cases} 3,5x+1,5y=2,250 \\ x=50-y \end{cases} \\ & \rightarrow \begin{cases} 3,5(50-y)+1,5y=2,250 \\ x=50-y \end{cases} \rightarrow \begin{cases} 175-3,5y+1,5y=2,250 \\ x=50-y \end{cases} \\ & \rightarrow \begin{cases} -2y=-64 \\ x=50-32 \end{cases} \rightarrow \begin{cases} y=32 \\ x=18 \end{cases} \end{aligned}$$

18 kg de 3,5 y 32 kg de 1,5

$$\begin{aligned} (2b) \quad & \begin{cases} x+y=110 \\ 20x+50y=3100 \end{cases} \rightarrow \begin{cases} x=110-y \\ 20(110-y)+50y=3100 \end{cases} \\ & \rightarrow \begin{cases} x=110-y \\ 2200-20y+50y=3100 \end{cases} \rightarrow \begin{cases} x=110-y \\ 30y=900 \end{cases} \\ & \rightarrow \begin{cases} x=110-30 \\ y=30 \end{cases} \rightarrow \boxed{x=80} \end{aligned}$$

80 billetes de 20€ y 30 billetes de 50€