

Corrección Control 3ª Evaluación - Matemáticas 2º ESO 25-04-18

1) a)
$$\begin{cases} x - y = -1 \\ 2x + 2y = 2 \end{cases} \rightarrow \begin{cases} x = y - 1 \\ x = 1 - y \end{cases} \rightarrow y - 1 = 1 - y \rightarrow 2y = 2 \rightarrow \boxed{y = 1}$$

$x = 1 - 1 \Rightarrow \boxed{x = 0}$

b)
$$\begin{cases} 2x - 3y = 1 \\ 3x + 2y = 5 \end{cases} \rightarrow \begin{cases} x = \frac{1+3y}{2} \\ x = \frac{5-2y}{3} \end{cases} \rightarrow \frac{1+3y}{2} = \frac{5-2y}{3} \quad \text{mcm} = 6$$

$3(1+3y) = 2(5-2y)$
 $3+9y = 10-4y$
 $+9y+4y = 10-3$
 $13y = 7 \rightarrow \boxed{y = \frac{7}{13}}$

$x = \frac{1+3(\frac{7}{13})}{2} = \frac{34}{26} = \boxed{\frac{17}{13}}$

2) a)
$$\begin{cases} 4x + 2y = 16 \\ x - y = 1 \end{cases} \xrightarrow{\text{simplifico}} \begin{cases} 2x + y = 8 \\ x = 1 + y \end{cases} \rightarrow 2(1+y) + y = 8$$

$2 + 2y + y = 8$
 $3y = 6 \rightarrow \boxed{y = 2}$
 $x = 1 + 2 \rightarrow \boxed{x = 3}$

b)
$$\begin{cases} 2x + 5y = 9 \\ 3x + 4y = 10 \end{cases} \rightarrow \begin{cases} x = \frac{9-5y}{2} \\ \frac{3(9-5y)}{2} + 4y = 10 \quad \text{mcm} = 2 \end{cases}$$

$3(9-5y) + 8y = 20$
 $27 - 15y + 8y = 20$
 $-7y = -7 \rightarrow \boxed{y = 1}$
 $x = \frac{9-5}{2} = 2 \rightarrow \boxed{x = 2}$

3) a)
$$\begin{array}{l} 4x + 5y = 27 \\ 3x - 2y = 3 \end{array} \begin{array}{l} \times 2 \\ \times 5 \end{array} \rightarrow \begin{array}{l} 8x + 10y = 54 \\ 15x - 10y = 15 \end{array}$$

$$\underline{23x = 69} \rightarrow \boxed{x=3}$$

$$\begin{array}{l} 9 - 2y = 3 \\ -2y = -6 \end{array}$$

$$\boxed{y=3}$$

b)
$$\begin{array}{l} 5x + 7y = 22 \\ 4x - 3y = 9 \end{array} \begin{array}{l} \times 3 \\ \times 7 \end{array} \rightarrow \begin{array}{l} 15x + 21y = 66 \\ 28x - 21y = 63 \end{array}$$

$$\underline{43x = 129} \rightarrow \boxed{x=3}$$

$$\begin{array}{l} 12 - 3y = 9 \\ -3y = -3 \end{array}$$

$$\boxed{y=1}$$

4) a)
$$\begin{array}{l} 5x - 7y = 1 \\ 2x + 3y = 12 \end{array} \begin{array}{l} \times 3 \\ \times 7 \end{array} \rightarrow \begin{array}{l} 15x - 21y = 3 \\ 14x + 21y = 84 \end{array}$$

$$\underline{29x = 87} \rightarrow \boxed{x=3}$$

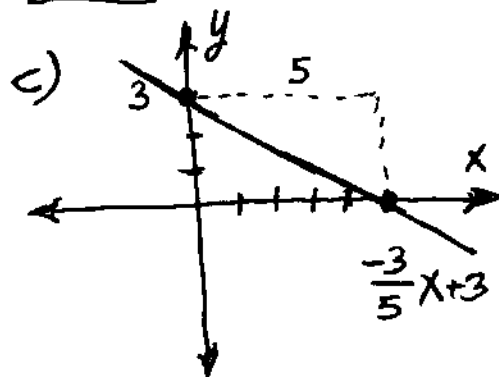
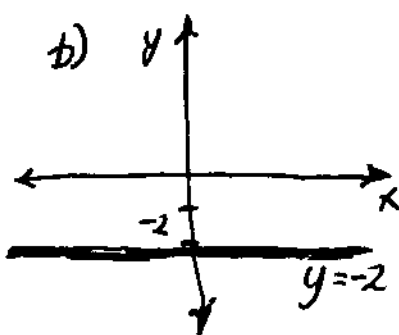
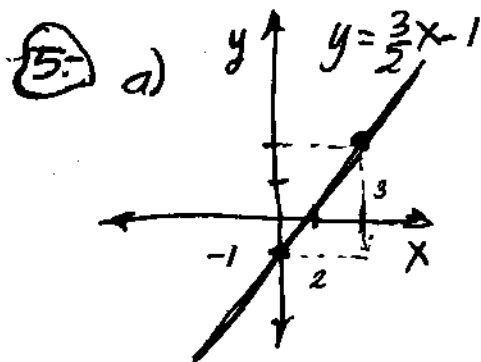
$$\begin{array}{l} 6 + 3y = 12 \\ 3y = 6 \end{array}$$

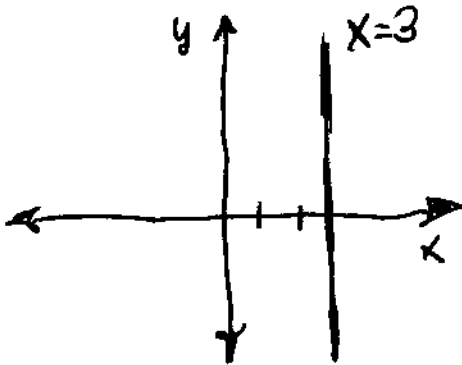
$$\boxed{y=2}$$

b)
$$\begin{array}{l} x - 4y = 1 \\ 3x - 5y = 17 \end{array} \begin{array}{l} \times 3 \\ \times -1 \end{array} \rightarrow \begin{array}{l} 3x - 12y = 3 \\ -3x + 5y = -17 \end{array}$$

$$\underline{-7y = -14} \rightarrow \boxed{y=2}$$

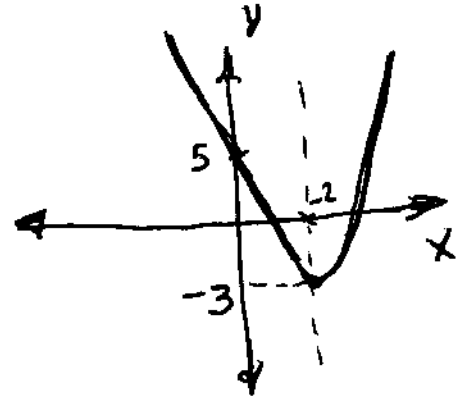
$$\begin{array}{l} x - 8 = 1 \\ \boxed{x=9} \end{array}$$





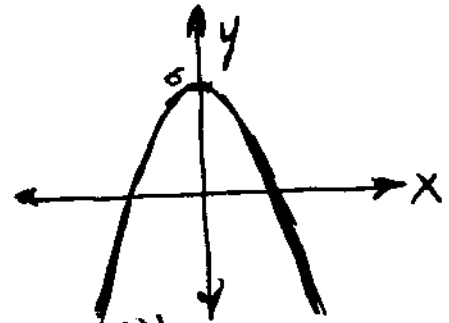
6- a) $y = 2x^2 - 8x + 5$

- ↖ Eje: $x = 2$
- ↗ Vértice: $y = -3$
- ↘ Corte OY: $y = 5$



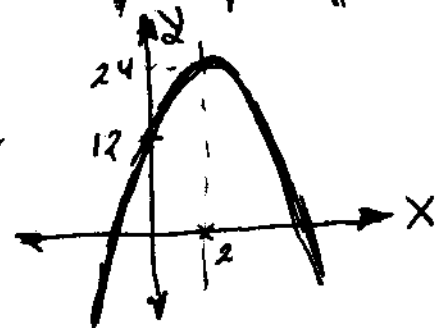
b) $y = 6 - x^2$

- ↖ Eje: $x = 0$
- ↗ Vértice: $y = 6$
- ↘ Corte OY: $y = 6$



c) $y = -3x^2 + 12x + 12$

- ↖ Eje: $x = 2$
- ↗ Vértice: $y = 24$
- ↘ OY: $y = 12$



d) $y = 3x^2 - 12x$

- ↖ Eje: $x = 2$
- ↗ Vértice: $y = -12$
- ↘ Corte OY: $y = 0$

