Gabriel León castro
118220515

1. $(2x-5)(x+3) \geq 0$

$$\begin{cases} 2x-5 \geq 0 \\ x+3 \geq 0 \end{cases}$$

$$\begin{cases} 2x-5 \leq 0 \\ x+3 \leq 0 \end{cases}$$

$$\begin{cases} x \geq \frac{5}{2} \\ x \geq -3 \end{cases}$$

$$\begin{cases} x \leq \frac{5}{2} \\ x \leq -3 \end{cases}$$

[redacted]

$x \in \left[\frac{5}{2}, +\infty\right[$

$x \in]-\infty, -3]$

$x \in]-\infty, -3] \cup \left[\frac{5}{2}, +\infty\right[$

2. $x^2 - 7x + 12 \leq 0$

$x^2 - 3x - 4x + 12 \leq 0$

$x \cdot (x-3) - 4(x-3) \leq 0$

$(x-3) \cdot (x-4) \leq 0$

$\begin{cases} x-3 \leq 0 \\ x-4 \geq 0 \end{cases}$

$\begin{cases} x-3 \geq 0 \\ x-4 \leq 0 \end{cases}$

$\begin{cases} x \leq 3 \\ x \geq 4 \end{cases}$

$\begin{cases} x \geq 3 \\ x \leq 4 \end{cases}$

$x \in [3, 4]$

4. $|2-5x| \geq 3$

$2-5x \geq 3, \quad 2-5x \geq 0$

$-(2-5x) \geq 3, \quad 2-5x < 0$

$x \leq -\frac{1}{5}, \quad x \leq \frac{2}{5}$

$x \geq 1, \quad x > \frac{2}{5}$

$x \in [-\infty, -\frac{1}{5}] \cup [1, +\infty[$

5. $3-4x < \frac{1}{2}, \quad 3-4x \geq 0$

$-(3-4x) < \frac{1}{2}, \quad 3-4x < 0$

$x > \frac{5}{8}, \quad x \leq \frac{3}{4}$

$x < \frac{7}{8}, \quad x > \frac{3}{4}$

$x \in]\frac{5}{8}, \frac{7}{8}[$

6. $(2,-7)$

7. $(1,2) \wedge (2,1)$

$m = \frac{1-2}{2-1} = -1$

$y - 2 = -1(x - 1$

8. $2x^2 + 2y^2 - 5x + 4y = 1$

$t = \frac{7}{4}$

$C = (\frac{5}{4}, -1$

9. $f(x) = \frac{2}{\sqrt{3-2x}}$

$f(x) = \frac{2}{\sqrt{-2x+3}}$

$f(x) \geq \frac{3}{2}$

$x \in]-\infty, \frac{3}{2}[$

10. $-2x - x^2$

$A = 1 \quad B = -2$

$h = \frac{2}{2(1)} = \frac{1}{2}$

$K = -2\left(\frac{1}{2}\right) - \left(\frac{1}{2}\right)^2 = -\frac{5}{4}$

$V = \left(\frac{1}{2}, -\frac{5}{4}\right)$

Vertice es un Mínimo