

## INECUACIONES SIMULTÁNEAS

## PRÁCTICA

- I. **Parte:** Resolver y graficar las siguientes desigualdades simultáneas. Expresar el conjunto solución.

|   |                                                                  |   |                                                  |
|---|------------------------------------------------------------------|---|--------------------------------------------------|
| 1 | $5x - 4 > 12 - 3x$                                               | y | $7x + 9 > 34 + 2x$                               |
| 2 | $-11x + 8x + 4 < 7$                                              | y | $-4x - 7 < 9 - 9x + 2 + 2x$                      |
| 3 | $x(x + 4) - 3 < (x - 1)(x + 3)$                                  | y | $2(3x - 1) < x + 8$                              |
| 4 | $(x + 3)(x - 2) - 2 \geq (x - 2)(x + 2)$                         | y | $2(x - 1) + 3(x + 4) > x + 6$                    |
| 5 | $\frac{3}{2}x - \frac{3}{4} - x \leq \frac{1}{2} - \frac{1}{3}x$ | y | $-\frac{1}{4}x - x < \frac{5}{8} - \frac{5}{6}x$ |
| 6 | $3x - 5 < 1$                                                     | y | $4 - 2x \geq 8$                                  |
| 7 | $3x(2 - 3x) + x(x - 5) > 4(3 - 2x^2)$                            | y | $5x(x + 7) - 8(x - 3) > x(5x + 3) + 27$          |
| 8 | $\frac{x - 8}{2} - \frac{4x - 3}{3} > 0$                         | y | $\frac{x}{3} + \frac{2x - 1}{5} < 0$             |



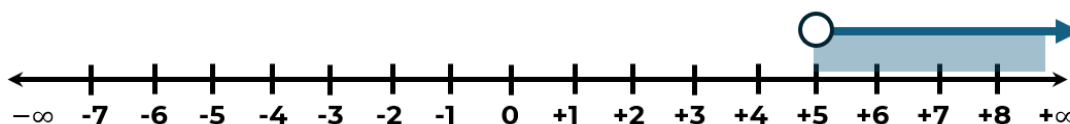
## Respuestas impares:

|   |                    |   |                    |
|---|--------------------|---|--------------------|
| 1 | $5x - 4 > 12 - 3x$ | y | $7x + 9 > 34 + 2x$ |
|---|--------------------|---|--------------------|

$$x > 5$$

$$(5, +\infty)$$

$$\{x \in \mathbb{R} : x > 5\}$$

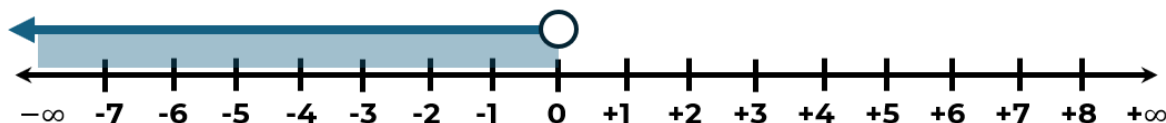


|   |                                 |   |                     |
|---|---------------------------------|---|---------------------|
| 3 | $x(x + 4) - 3 < (x - 1)(x + 3)$ | y | $2(3x - 1) < x + 8$ |
|---|---------------------------------|---|---------------------|

$$x < 0$$

$$(-\infty, 0)$$

$$\{x \in \mathbb{R} : x < 0\}$$

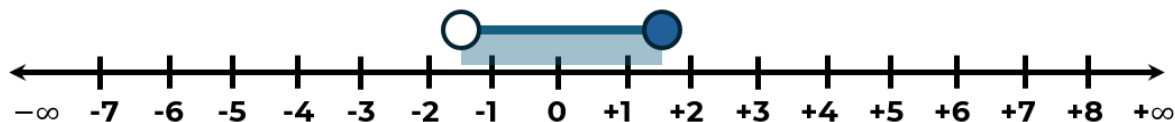


|   |                                                                  |   |                                                  |
|---|------------------------------------------------------------------|---|--------------------------------------------------|
| 5 | $\frac{3}{2}x - \frac{3}{4} - x \leq \frac{1}{2} - \frac{1}{3}x$ | y | $-\frac{1}{4}x - x < \frac{5}{8} - \frac{5}{6}x$ |
|---|------------------------------------------------------------------|---|--------------------------------------------------|

$$-\frac{3}{2} < x \leq \frac{3}{2}$$

$$\left(-\frac{3}{2}, \frac{3}{2}\right]$$

$$\left\{x \in \mathbb{R} : -\frac{3}{2} < x \leq \frac{3}{2}\right\}$$



|   |                                       |   |                                         |
|---|---------------------------------------|---|-----------------------------------------|
| 3 | $3x(2 - 3x) + x(x - 5) > 4(3 - 2x^2)$ | y | $5x(x + 7) - 8(x - 3) > x(5x + 3) + 27$ |
|---|---------------------------------------|---|-----------------------------------------|

$$x > 12$$

$$(12, +\infty)$$

$$\{x \in \mathbb{R} : x > 12\}$$

