

2.7 Ejercicios

Ejer. 1-40: Resuelva la desigualdad, y exprese las soluciones en términos de intervalos siempre que sea posible.

1 $(3x + 1)(5 - 10x) > 0$ 2 $(2 - 3x)(4x - 7) \geq 0$

3 $(x + 2)(x - 1)(4 - x) \leq 0$

4 $(x - 5)(x + 3)(-2 - x) < 0$

5 $x^2 - x - 6 < 0$

6 $x^2 + 4x + 3 \geq 0$

7 $x^2 - 2x - 5 > 3$

8 $x^2 - 4x - 17 \leq 4$

9 $x(2x + 3) \geq 5$

10 $x(3x - 1) \leq 4$

11 $6x - 8 > x^2$

12 $x + 12 \leq x^2$

13 $x^2 < 16$

14 $x^2 > 9$

15 $25x^2 - 9 < 0$

17 $16x^2 \geq 9x$

19 $x^4 + 5x^2 \geq 36$

21 $x^3 + 2x^2 - 4x - 8 \geq 0$

22 $2x^3 - 3x^2 - 2x + 3 \leq 0$

23 $\frac{x^2(x + 2)}{(x + 2)(x + 1)} \leq 0$

25 $\frac{x^2 - x}{x^2 + 2x} \leq 0$

27 $\frac{x - 2}{x^2 - 3x - 10} \geq 0$

29 $\frac{-3x}{x^2 - 9} > 0$

31 $\frac{x + 1}{2x - 3} > 2$

33 $\frac{1}{x - 2} \geq \frac{3}{x + 1}$

35 $\frac{4}{3x - 2} \leq \frac{2}{x + 1}$

37 $\frac{x}{3x - 5} \leq \frac{2}{x - 1}$

39 $x^3 > x$

16 $25x^2 - 9x < 0$

18 $16x^2 > 9$

20 $x^4 + 15x^2 < 16$

24 $\frac{(x^2 + 1)(x - 3)}{x^2 - 9} \geq 0$

26 $\frac{(x + 3)^2(2 - x)}{(x + 4)(x^2 - 4)} \leq 0$

28 $\frac{x + 5}{x^2 - 7x + 12} \leq 0$

30 $\frac{2x}{16 - x^2} < 0$

32 $\frac{x - 2}{3x + 5} \leq 4$

34 $\frac{2}{2x + 3} \leq \frac{2}{x - 5}$

36 $\frac{3}{5x + 1} \geq \frac{1}{x - 3}$

38 $\frac{x}{2x - 1} \geq \frac{3}{x + 2}$

40 $x^4 \geq x^2$