

Non-Linear Inequalities (Sign Analysis)

Use Sign Analysis to graph the following inequalities.

1. $(x-3)(x+4) > 0$

2. $(x+2)(x-5) > 0$

3. $x(x-5) > 0$

4. $x(x+2) > 0$

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

6. $(x+3)(x-5) < 0$

7. $x(x-5) < 0$

8. $x(x+4) < 0$

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

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

11. $(x-5)(x-1) \geq 0$

12. $(x-2)(x-4) \geq 0$

13. $(x+3)(x+5) \leq 0$

14. $(x-3)(x-5) \leq 0$

15. $x^2 - x - 2 > 0$

16. $x^2 + 7x + 10 > 0$

17. $x^2 - 5x + 4 > 0$

18. $x^2 - 2x - 3 < 0$

19. $x^2 + x - 12 \geq 0$

20. $x^2 - 4x - 12 \geq 0$

21. $x^2 + 6x + 5 \leq 0$

22. $x^2 + 4x - 21 \leq 0$

23. $x^2 - 3x > 10$

24. $x^2 - 4x > -3$

25. $x^2 > 1$

26. $x^2 > 4$

27. $x^2 \leq 9$

28. $x^2 \leq 16$

29. $x(x-4)(x+1) < 0$

30. $x(x+3)(x-2) < 0$

31. $x^3 - 7x^2 + 10x > 0$

32. $x^3 - 8x^2 + 12x > 0$

33. $\frac{x}{x-4} \geq 0$

34. $\frac{x}{x+4} \geq 0$

35. $\frac{x-2}{x+4} \geq 0$

36. $\frac{x-2}{x+1} \geq 0$

37. $\frac{x+2}{x} \leq 0$

38. $\frac{x-2}{x} \leq 0$

39. $\frac{x-3}{x+4} > 0$

40. $\frac{x-1}{x+2} > 0$

41. $\frac{x+1}{x+6} > 1$

42. $\frac{x-1}{x-2} > 1$

43. $\frac{x-5}{x} \leq 1$

44. $\frac{x}{x-1} \leq 2$

45. $\frac{x-1}{x^2+x-12} > 0$

46. $\frac{x+2}{x^2+5x-14} > 0$

47. $\frac{x^2-x-2}{x-4} \leq 0$

48. $\frac{x^2+x-12}{x+1} \leq 0$