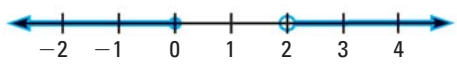
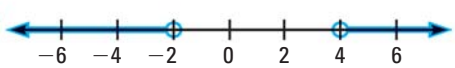
EXAMPLE 2 on p. 41 for Exs. 11–21

WRITING COMPOUND INEQUALITIES **Write the compound inequality that is represented by the graph.**

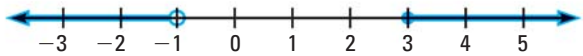
11. 

12. 

13. 

14. 

15. **MULTIPLE CHOICE** What compound inequality is graphed below?



(A) $-1 < x < 3$ **(B)** $x \le -1$ or $x > 3$

(C) $x < -1$ or $x \ge 3$ **(D)** $x > -1$ or $x \le 3$

GRAPHING COMPOUND INEQUALITIES **Graph the compound inequality.**

16. $2 \le x \le 5$ **17.** $-3 < x < 4$ **18.** $5 \le x < 10$

19. $x < 0$ or $x > 2$ **20.** $x \le -1$ or $x > 1$ **21.** $x > -2$ or $x < -5$

EXAMPLES 3 and 4 on pp. 42–43 for Exs. 22–35

SOLVING INEQUALITIES **Solve the inequality. Then graph the solution.**

22. $x + 4 > 10$ **23.** $x - 3 \le -5$ **24.** $4x - 8 \ge -4$

25. $15 - 3x > 3$ **26.** $11 + 8x \ge 7$ **27.** $4 + \frac{3}{2}x \le 13$

28. $2x - 6 > 3 - x$ **29.** $4x + 14 < 3x + 6$ **30.** $5 - 8x \le 19 - 10x$

31. $21x + 7 < 3x + 16$ **32.** $18 + 2x \le 9x + 4$ **33.** $2(x - 4) > 4x + 6$

ERROR ANALYSIS ***Describe*** **and correct the error in solving the inequality.**

34.

$2x + 8 \le 6x - 4$

$-4x \le -12$

$x \le 3$

35.

$10 + 3x > 5x$

$10 < 2x$

$5 < x$

36. **OPEN-ENDED MATH** Write two different inequalities of the form $ax + b > c$ that have a solution of $x > 5$.

EXAMPLE 5 on p. 43 for Exs. 37–42

"AND" COMPOUND INEQUALITIES **Solve the inequality. Then graph the solution.**

37. $-5 < x + 1 < 4$ **38.** $2 \le x - 3 \le 6$ **39.** $-3 < 4 - x \le 3$

40. $2 < 3x - 1 \le 6$ **41.** $-4 \le 2 + 4x < 0$ **42.** $0 \le \frac{3}{4}x + 3 \le 4$

EXAMPLE 6 on p. 43 for Exs. 43–48

"OR" COMPOUND INEQUALITIES **Solve the inequality. Then graph the solution.**

43. $x + 1 < -3$ or $x - 2 > 0$ **44.** $x - 4 \le -6$ or $x + 2 > 5$

45. $2x - 3 \le -4$ or $3x + 1 \ge 4$ **46.** $2 + 3x < -13$ or $4 + 2x > 7$

47. $0.3x - 0.5 < -1.7$ or $0.4x \ge 2.4$ **48.** $-x - 4 \ge 1$ or $2 - 5x \le -8$

CHALLENGE **Solve the inequality. If there is no solution, write *no solution*. If the inequality is always true, write *all real numbers*.**

49. $2(x - 4) > 2x + 1$ **50.** $4x - 5 \le 4(x + 2)$ **51.** $2(3x - 1) > 3(2x + 3)$