[14-05-07-L8]

2.4 Exercises

Solve each inequality, then graph the solution. See Examples 1–5.

1. $4x > 8$

2. $6y > 18$

3. $2m \leq -6$

4. $5k \leq -15$

5. $3r + 1 \geq 16$

6. $2m - 5 \geq 15$

7. $\frac{3k - 1}{4} > 2$

8. $\frac{5z - 6}{8} < 3$

9. $-\frac{3}{4}r \geq 21$

10. $-\frac{2}{3}y < -10$

11. $-\frac{3}{2}y \leq -\frac{9}{2}$

12. $-\frac{2}{5}x \geq -4$

13. $-1.3m > 3.9$

14. $-2.5y \leq -7.5$

15. $\frac{2k - 5}{-4} > 1$

16. $\frac{3z - 2}{-5} \leq 4$

17. $-r \leq -7$

18. $-m > -12$

19. $-4x + 3 < 15$

20. $-6p - 2 \geq 16$

21. $-3 < x - 5 < 6$

22. $-6 < x + 1 < 8$

23. $-6 \leq 2z + 4 \leq 12$

24. $-15 < 3p + 6 < -9$

25. $-19 \leq 3x - 5 \leq -9$

26. $-16 < 3t + 2 < -11$

27. $-4 \leq \frac{2x - 5}{6} \leq 5$

28. $-8 \leq \frac{3m + 1}{4} \leq 3$

29. $4.2817z \geq -13.27327$

30. $9.1428p < -7.31424$

31. $3(x + 2) - 5x < x$

32. $2(3k - 5) + 7 > k + 12$

33. $y + 4(2y - 1) \geq 5y$

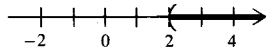
34. $-2(m - 4) \leq -3(m + 1)$

35. $-(4 + r) + 2 - 3r < -10$

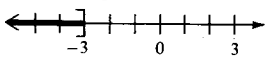
36. $-(9 + k) - 5 + 4k \geq 1$

Section 2.4 (page 68)

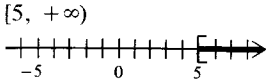
1. $(2, +\infty)$



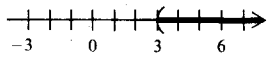
3. $(-\infty, -3]$



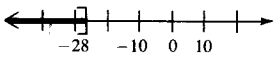
5. $[5, +\infty)$



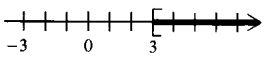
7. $(3, +\infty)$



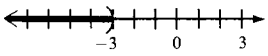
9. $(-\infty, -28]$



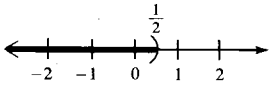
11. $[3, +\infty)$



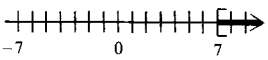
13. $(-\infty, -3)$



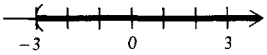
15. $(-\infty, 1/2)$



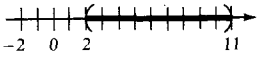
17. $[7, +\infty)$



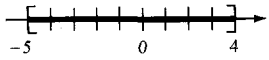
19. $(-3, +\infty)$



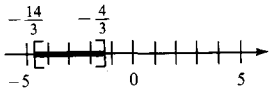
21. $(2, 11)$



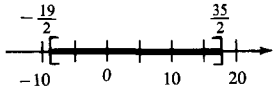
23. $[-5, 4]$



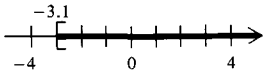
25. $[-14/3, -4/3]$



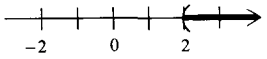
27. $[-19/2, 35/2]$



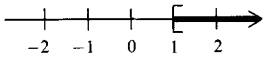
29. $[-3.1, +\infty)$



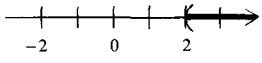
31. $(2, +\infty)$



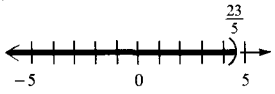
33. $[1, +\infty)$



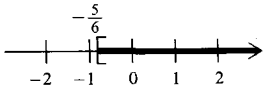
35. $(2, +\infty)$



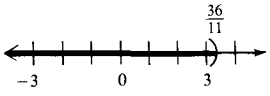
37. $(-\infty, 23/5)$



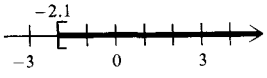
39. $[-5/6, +\infty)$



41. $(-\infty, 36/11)$



43. $[-2.1, +\infty)$



45. 87 points **47.** 4 summers **49.** More than 25 units will produce a profit **51.** Does not make sense; $5 \not< 0$ **53.** Does not make sense; $5 \not> 12$ **55.** [10/9, 7/6] **57.** All numbers between -2 and 2, that is, $(-2, 2)$ **59.** All numbers greater than or equal to 3, that is, $[3, +\infty)$ **61.** All numbers greater than or equal to -9, that is, $[-9, +\infty)$ **63.** $1 > -x > -5$, or $-5 < -x < 1$ **65.** 5 **67.** 1 **69.** 11 **71.** -3 and 3