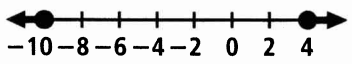
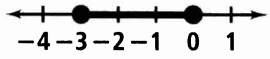
Answers - Chapter 3 Study Guide

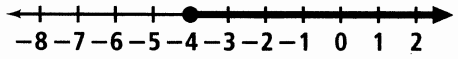
1a. yes **1b.** no **1c.** no **2a.** yes **2b.** yes **2c.** no
3. $x \geq 75$ **4.** $x \leq 28$ **5.** $x \leq 54$ **6.** $x > 25$
7. $x < -1$ **8.** $x \geq 2$ **9.** $x < 1.5$ **10.** $x \geq -3.5$
11. $r \geq 4$ or $r \leq -10$;



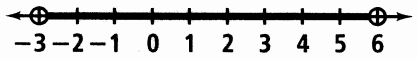
12. $-3 \leq q \leq 0$;



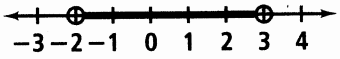
13. $y \geq -4$;



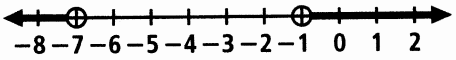
14. $-3 < n < 6$;



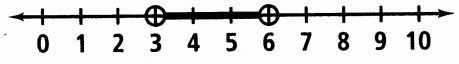
15. $-2 < c < 3$;



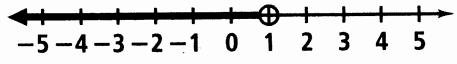
16. $b < -7$ or $b > -1$;



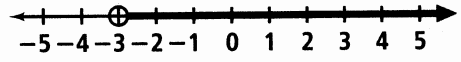
17. $3 < g < 6$;



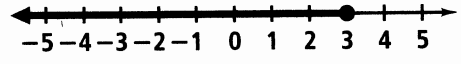
18. $x < 1$;



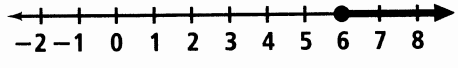
19. $m > -3$;



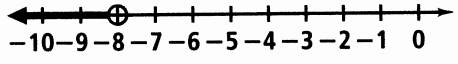
20. $y \leq 3$;



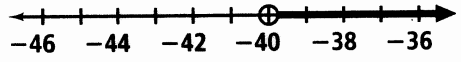
21. $f \geq 6$;



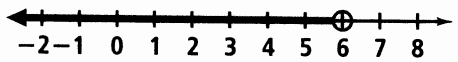
22. $a < -8$;



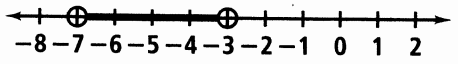
23. $x > -40$;



24. $x < 6$;



25. $-7 < d < -3$;



26. $x < -1$ **27.** $y < 0$ **28.** $x \leq 3$ **29.** $x < -3$
30. Subtract 3 from each side to get $|2d| < 4$. Remove absolute value signs by writing as the compound inequality $2d < 4$ and $2d > -4$. Divide each side of each inequality by 2. The answer is $-2 < d < 2$.

31. $x \geq 1$ or $x \leq -2$

32. $-3 < x < 1$ **33.** $x = 8$ or $x = -2$
34. $x = 4$ or $x = -\frac{4}{3}$ **35.** $c = 4$ or $c = -\frac{18}{5}$

36. $y = 2$ or $y = 14$
37. No such situation exists; inequality is false.
38. $15x - 30 \geq 40$; 5 lawns
39. $6x - 75 > 135$; 36 bird feeders
40. $|x - 13.05| \leq 0.015$; between 13.035 and 13.065 mm, inclusive **41.** B