

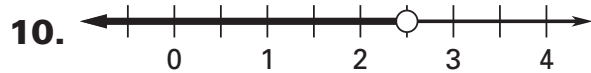
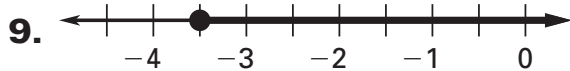
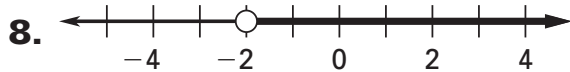
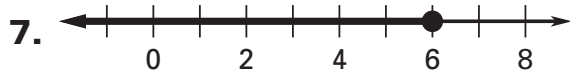
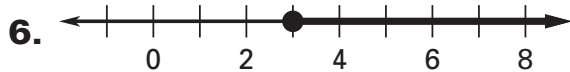
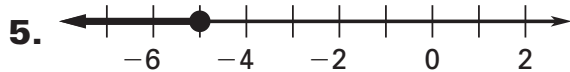
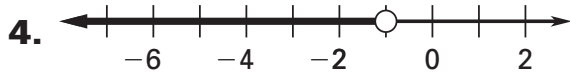
Answers for 1.6

For use with pages 44–47

1.6 Skill Practice

1. graph

2. *Sample answer:* If a , b , and c are real numbers and $a > b$, then $a - c > b - c$. If a , b , and c are real numbers with $c > 0$ and $a > b$, then $ac > bc$. If a , b , and c are real numbers with $c > 0$ and $a > b$, then $\frac{a}{c} > \frac{b}{c}$. If a , b , and c are real numbers with $c < 0$ and $a > b$, then $ac < bc$. If a , b , and c are real numbers with $c < 0$ and $a > b$, then $\frac{a}{c} < \frac{b}{c}$.



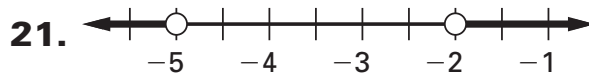
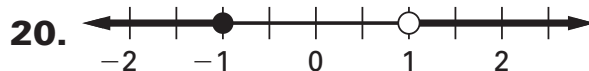
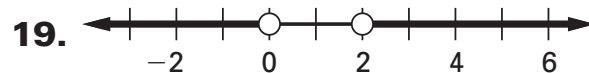
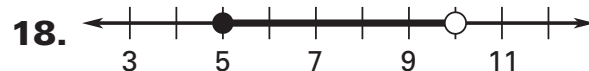
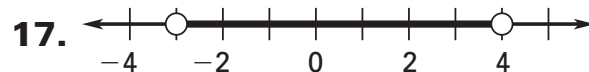
11. $-3 \leq x \leq 1$

12. $x \leq 0$ or $x > 2$

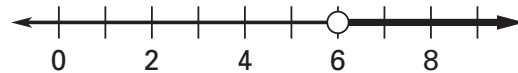
13. $x < -2$ or $x > 4$

14. $-3 < x \leq 9$

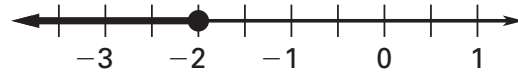
15. C



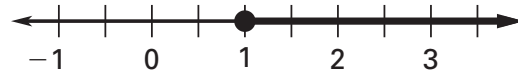
22. $x > 6$



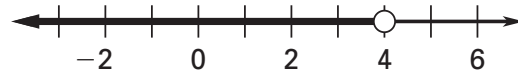
23. $x \leq -2$



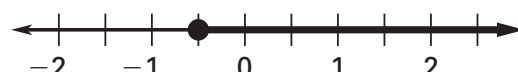
24. $x \geq 1$



25. $x < 4$



26. $x \geq -\frac{1}{2}$



Answers for 1.6 *continued*

For use with pages 44–47

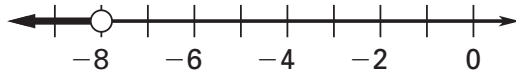
27. $x \leq 6$



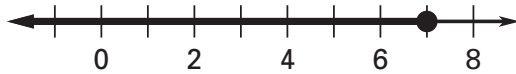
28. $x > 3$



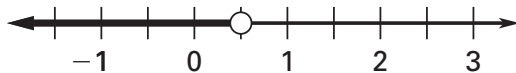
29. $x < -8$



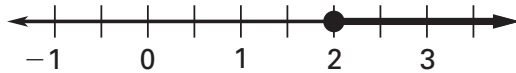
30. $x \leq 7$



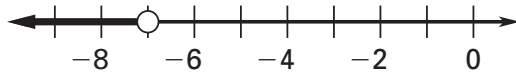
31. $x < \frac{1}{2}$



32. $x \geq 2$



33. $x < -7$



34. The inequality symbol should be switched when dividing by a negative number; $x \geq 3$.

35. The inequality symbol should not be reversed when subtracting; $10 > 2x$, $5 > x$.

36. *Sample answer:*

$$4x + 2 > 22, 3x + 12 > 27$$

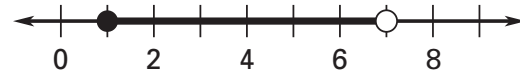
37. $-6 < x < 3$



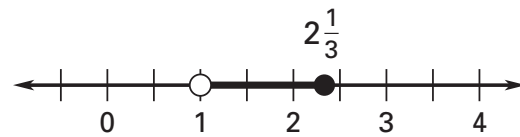
38. $5 \leq x \leq 9$



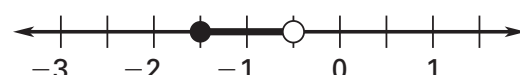
39. $1 \leq x < 7$



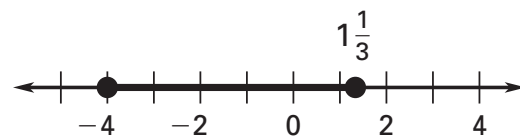
40. $1 < x \leq 2\frac{1}{3}$



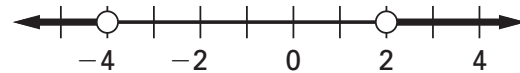
41. $-1\frac{1}{2} \leq x < -\frac{1}{2}$



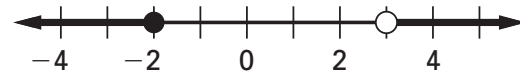
42. $-4 \leq x \leq 1\frac{1}{3}$



43. $x < -4$ or $x > 2$



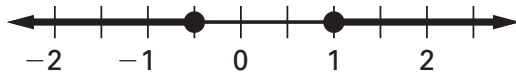
44. $x \leq -2$ or $x > 3$



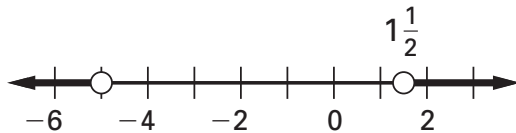
Answers for 1.6 *continued*

For use with pages 44–47

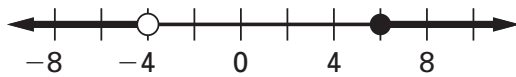
45. $x \leq -\frac{1}{2}$ or $x \geq 1$



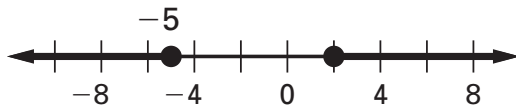
46. $x < -5$ or $x > 1\frac{1}{2}$



47. $x < -4$ or $x \geq 6$



48. $x \leq -5$ or $x \geq 2$



49. no solution

50. all real numbers

51. no solution

1.6 Problem Solving

52. $5x + 50 \leq 100$,
 $x \leq 10$ swim classes

53. $45x + 35 \leq 250$, $x \leq 4\frac{4}{7}$ days; 4 or fewer days

54. $65 \leq T < 72$; $72 \leq T < 80$; $T \geq 80$

55. a. $0 \leq e < 500$

b. $1400 \leq e < 2429$

c. $0 \leq e < 500$ or $1400 \leq e < 2429$

56. D

57. $50 \leq F \leq 95$; $10 \leq C \leq 35$

58. a. $45 \leq s \leq 70$

b. $s < 45$ or $s > 70$

c. $72.45 \leq s \leq 112.7$,
 $s < 72.45$ or $s > 112.7$

59. a. Amy: $0.65(84) + 0.15(80) + 0.2w \geq 85$,
Brian: $0.65(80) + 0.15(100) + 0.2x \geq 85$,
Clara: $0.65(75) + 0.15(95) + 0.2y \geq 85$,
Dan: $0.65(80) + 0.15(90) + 0.2z \geq 85$

b. $w \geq 92$; $x \geq 90$;
 $y \geq 110$; $z \geq 97.5$

c. Amy, Brian, and Dan; it is impossible to score over 100 points on a test, so Clara will not be able to achieve a grade of 85 or better.

Answers for 1.6 *continued*

For use with pages 44–47

- 60.** $65 \leq 2.75x + 4.25(20 - x) \leq 75$,
 $6\frac{2}{3} \leq x \leq 13\frac{1}{3}$; 7 daylight cameras
and 13 flash cameras, 8 daylight
cameras and 12 flash cameras,
9 daylight cameras and 11 flash
cameras, 10 daylight cameras
and 10 flash cameras, 11 daylight
cameras and 9 flash cameras,
12 daylight cameras and 8 flash
cameras, 13 daylight cameras
and 7 flash cameras

1.6 Mixed Review

- 61.** 12 **62.** 42
63. 100 **64.** 143.5
65. 125.5 **66.** 426
67. $3\frac{5}{8}$ **68.** $\frac{11}{24}$
69. -2 ; 5, 6, 8
70. 2.5; 8, 8, 9, 9
71. 12; 10, 10, 15, 15
72. $y = 8x + 12$
73. $y = -100x + 425$