ANSWERS FOR 1.6

For use with pages 45-47

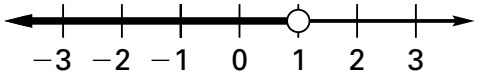
1.6 Guided Practice

2. False; multiplying both sides of an inequality by the same negative number does not produce an equivalent inequality.

4.

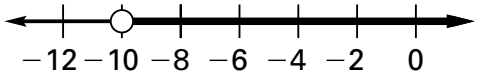
$x < 13$

6.



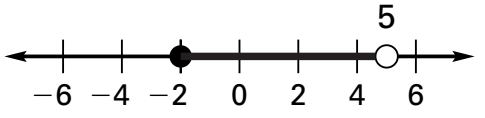
$x < 1$

8.



$x > -10$

10.



12. $-50 < C < 140$
$-58 < F < 284$

1.6 Practice and Applications

14. A

16. B

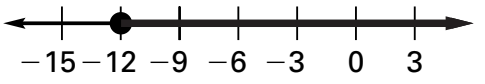
18. E

20. yes

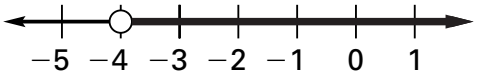
22. yes

24. no

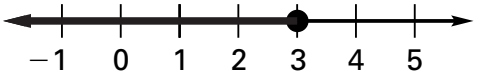
26. $n \geq -12$



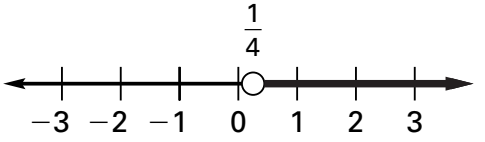
28. $x > -4$



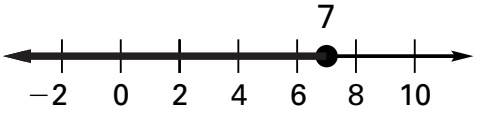
30. $n \leq 3$



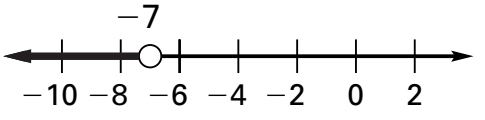
32. $n > \frac{1}{4}$



34. $n \leq 7$



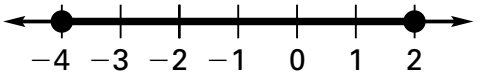
36. $x < 7$



38. $-4 \leq x \leq 2$

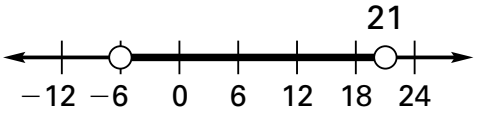
ANSWERS FOR 1.6 (CONT.)

For use with pages 45-47

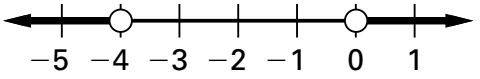


40. $-3 \leq n < \frac{3}{2}$

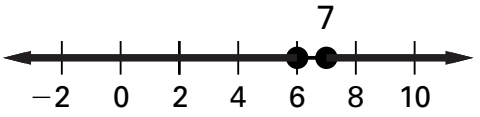
42. $-6 < x < 21$



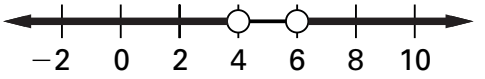
44. $x < -4$ or $x > 0$



46. $x \leq 6$ or $x \geq 7$



48. $x < 4$ or $x > 6$



50. You can play the game 13 times. If you play the game 13 times, pay the fee, and pay for food you will spend $49.75.

52. $-89.15 \leq C \leq -31.15$

54. *Sample answer:*
high 80°F
low 55°F

$55° \leq F \leq 80°$

$55° \leq \frac{9}{5}C + 32 \leq 80$

$12.78 \leq K - 273.15 \leq 26.67$

$23 \leq \frac{9}{5}C \leq 48$

ANSWERS FOR 1.6 (CONT.)

For use with pages 45-47

$285.93 \leq K \leq 299.82$
$12.78 \leq C \leq 26.67$

56. $1.33 > c$

58. a. $10 < x < 160$

b. The triangle inequality theorem says that the distance between Lake Tahoe and Sanora has to be less than 160. 170 is greater than 160, therefore it must be a misprint.

c. A. 35 mi + 65 mi > 45 mi
100 mi > 45 mi
okay

B. 15 mi + 50 mi > 64 mi
65 mi > 64 mi
okay

C. 49 mi + 28 mi > 78 mi
77 mi > 78 mi
not okay

D. 55 mi + 72 mi > 41 mi
127 mi > 41 mi
okay

60. *Sample answer:*
$x < x + 1$
$0 < 1$
This is a true statement, therefore all real numbers are solutions to $x < x + 1$.

Mixed Review

62. inverse property of addition

64. distributive property

66. $-\frac{5}{9}$ **68.** 4