Answers to Course 2 Unit 2 Practice

LESSON 5-1

1. a. $x = 8$; Answers may vary. The Commutative Property was used to change the order of the second addend $(9 + 8)$ to $(8 + 9)$. Then the Associative Property was used to change the grouping of the addends so that you have $(12 + 8) + 9$.

b. $a = 6$; Answers may vary. The Commutative Property was used to change the order of the second addend $\left(6 + \frac{2}{3}\right)$ to $\left(\frac{2}{3} + 6\right)$. Then the Associative Property was used to change the grouping of the addends so that you have $\left(\frac{1}{3} + \frac{2}{3}\right) + 6$.

c. $n = 1$; Answers may vary. The Identity Property for Multiplication states that when 1 is used as a factor, it does not change the result of the calculation. Since 15 is unchanged by multiplication, the variable must be 1.

d. $y = \frac{5}{8}$; Answers may vary. The Additive Inverse Property for Addition means that the sum of a number and its opposite is equal to 0. Since the sum is equal to zero, the variable must be the additive inverse of $-\frac{5}{8}$

2. Sample answers for items **a.–d.**

a. $\left(\frac{1}{2} \times 5\right) \times 2 = \frac{1}{2}(5 \times 2)$

b. $15 + (-15) = 0$

c. $85 + 27 = 27 + 85$

d. $5 \times 1 = 5$

3. D

4. Answers may vary. Sample answer: You cannot use the Commutative Property. You cannot put on your shoes before your socks.

5. Answers may vary. Sample answer: The Commutative Property allows you to change the order of the two numbers that will be added or multiplied. For example, $2 + 3 = 3 + 2$. The Associative Property allows you to regroup the three or more numbers that will be added or multiplied. For example, $7 + (3 + 8) = (7 + 3) + 8$.

LESSON 5-2

6. a. $30n + 27$

b. $8x + 40$

c. $72k - 36$

d. $ab + 4a$

7. a. $16(3 - a)$

b. $12(5n + 4)$

c. $15(3y + 1)$

d. $7(9c - 7d)$

8. C

9. Use of properties will vary; check students' applications of the properties of operations for parts a—d.

a. 8.5

b. 15.2

c. $2\frac{5}{9}$

d. $\frac{5}{8}$

10. $6w + 6$

LESSON 6-1

11. $15d + 23 = 473$

12. $3h + 15 = 30$

13. $8.99b + 199.99 = 244.94$

14. $18t + 45 = 153$

15. $9h + 25 = 150$

LESSON 6-2

16. D

17. **a.** $x = 3$

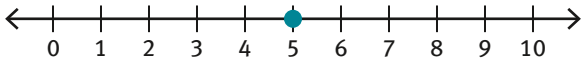
b. $y = 4$

c. $y = 5\frac{1}{2}$ or $y = 5.5$

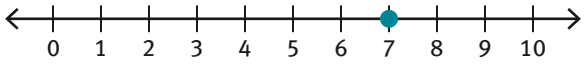
d. $a = -1$

e. $k = \frac{2}{3}$

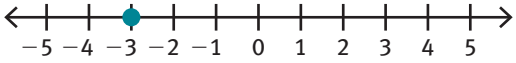
18. **a.** $b = 5$



b. $m = 7$

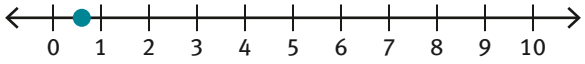


c. $c = -3$



d. $h = 4$

e. $x = \frac{3}{5}$



19. \$9.50; $28x + 94 = 360$

20. 27 supporters; $5x + 15 = 150$

LESSON 7-1

21. $\frac{p}{5} + 7 \geq 15$

22. $19.59s + 49 < 100$

23. $2n - 7 > 59$

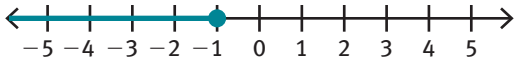
24. $4w + 7 < 30$

25. $9.49c + 38 \leq 75$

LESSON 7-2

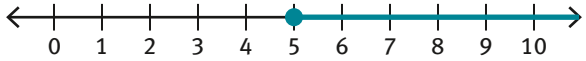
26. B

27. **a.** $x \leq -1$;



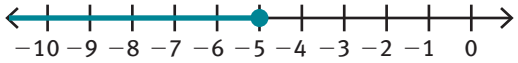
b. $a > 3$;

c. $h \geq 5$;



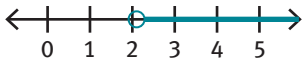
d. $z < \frac{1}{2}$;

e. $k \leq -5$;

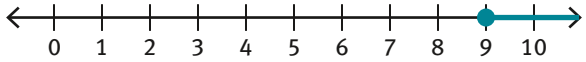


f. $x \leq \frac{2}{3}$;

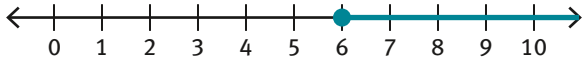
g. $b > 2\frac{1}{10}$



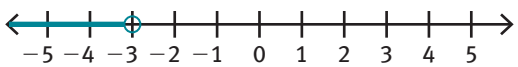
h. $m \geq 9$;



i. $y \geq 6$;



j. $-3 < d$ or $d > -3$;



28. Sample answer: 9, 10, 11. Any number greater than −8 will make the inequality true.

29. $10.5h + 18 \leq 50$; 3 hours

30. $35.5t + 7 \leq 150$; 4 tickets