Lesson 2.1

Challenge Practice

1.

$17 + 28 + 33 + 12 = (17 + 28) + 33 + 12$ Use order of operations.

$= (28 + 17) + 33 + 12$ Comm. prop. of add.

$= 28 + (17 + 33) + 12$ Assoc. prop. of add.

$= 28 + 50 + 12$ Add 17 and 33.

$= (28 + 50) + 12$ Use order of operations.

$= (50 + 28) + 12$ Comm. prop. of add.

$= 50 + (28 + 12)$ Assoc. prop. of add.

$= 50 + 40$ Add 28 and 12.

$= 90$ Add 50 and 40.

2.

$1.25 + 3.25 + 4.75 + 3.5$

$= (1.25 + 3.25) + 4.75 + 3.5$ Use order of operations.

$= 4.5 + 4.75 + 3.5$ Add 1.25 and 3.25.

$= (4.5 + 4.75) + 3.5$ Use order of operations.

$= (4.75 + 4.5) + 3.5$ Comm. prop. of add.

$= 4.75 - (4.5 + 3.5)$ Assoc. prop. of add.

$= 4.75 - 8$ Add 4.5 and 3.5.

$= 12.75$ Add 4.75 and 8.

3.

$12(13)(5)(-9)$

$= [12(13)](5)(-9)$ Use order of operations.

$= [13(12)](5)(-9)$ Comm. prop. of mult.

$= 13[12(5)](-9)$ Assoc. prop. of mult.

$= 13(60)(-9)$ Multiply 12 and 5.

$= 13[60(-9)]$ Assoc. prop. of mult.

$= 13(-540)$ Multiply 60 and -9.

$= -7020$ Multiply 13 and -540.

4. 25 **5.** 312 **6.** 5400 in. **7.** 4 yd^2

8.

$1 \cdot (cd + 0) + ab - dc$

$= 1 \cdot cd + ab - dc$ Identity prop. of add.

$= cd + ab - dc$ Identity prop. of mult.

$= (cd + ab) - dc$ Use order of operations.

$= (ab + cd) - dc$ Comm. prop. of add.

$= ab + dc - dc$ Comm. prop. of mult.

$= ab + [dc + (-dc)]$ Assoc. prop. of add.

$= ab + 0$ Add dc and $-dc$.

$= ab$ Identity prop. of add.

Lesson 2.2

Challenge Practice

1. 84 **2.** 12 **3.** 5 **4.** $(6x - 12)$ square units

5. $(6x + 20)$ square units **6.** $2y^2 - 22y$

7. $7a^2 - a$ **8.** $-6xy$ **9.** $11x - 5$

Lesson 2.3

Challenge Practice

1. $13a - 23$ **2.** $15y + 38$ **3.** $-25t + 74$

4. $-11m + 46$ **5.** $19a + 7b + 22$ **6.** $15y$

7. $4m + 15$ **8.** Perimeter: $(8x + 18)$ units; Area: $(9x + 36)$ square units

9. Perimeter: $(24y)$ units; Area: $(34y - 8)$ square units

Lesson 2.4

Challenge Practice

1. 10 **2.** -56 **3.** -33 **4.** -15 **5.** 2.5 lb

6. $4 - x = -10$; 14 **7.** $\frac{120}{r} = 30$; 4

8. 8; $2x$ must be equal to 16 because $16 - 3 = 13$ and $2 \cdot 8 = 16$.

9. 4; $\frac{x}{4}$ must be equal to 1 because $1 + 2 = 3$ and $\frac{4}{4} = 1$.

Lesson 2.5

Challenge Practice

1. 573 **2.** –293 **3.** -15 **4.** 2 **5.** 5 in.

6. 5 cm **7.** \$15 **8.** 1.5 h; 6:00 P.M.

9. $x + 7 = 46$

Lesson 2.6

Challenge Practice

1. 90 **2.** -6 **3.** -32 **4.** 2 **5.** 32,400 ft

6. 12 in. **7.** First number: 5; second number: 20; third number: 40

Lesson 2.7

Challenge Practice

1. $33.82m - 59.63$ **2.** $16.8r + 39.86$

3. $22.87a - 10.8$ **4.** $-0.9x + 23.9$ **5.** 2.6

6. 3.1 **7.** 6 in. **8.** 3 evenings