

# 1-6 Practice

Find each product. Simplify, if necessary.

1.  $-5(-7)$

2.  $8(-11)$

3.  $9 \cdot 12$

4.  $(-9)^2$

5.  $-3 \times 12$

6.  $-5(-9)$

7.  $-3(2.3)$

8.  $(-0.6)^2$

9.  $8(-2.4)$

10.  $-\frac{3}{4} \cdot \frac{2}{9}$

11.  $-\frac{2}{5} \left( -\frac{5}{8} \right)$

12.  $\left( \frac{2}{3} \right)^2$

13. After hiking to the top of a mountain, Raul starts to descend at the rate of 350 feet per hour. What real number represents his vertical change after  $1\frac{1}{2}$  hours?

14. A dolphin starts at the surface of the water. It dives down at a rate of 3 feet per second. If the water level is zero, what real number describes the dolphin's location after  $3\frac{1}{2}$  seconds?

Simplify each expression.

15.  $\sqrt{1600}$

16.  $-\sqrt{625}$

17.  $\pm\sqrt{10,000}$

18.  $-\sqrt{0.81}$

19.  $\pm\sqrt{1.44}$

20.  $\sqrt{0.04}$

21.  $\pm\sqrt{\frac{4}{9}}$

22.  $-\sqrt{\frac{16}{49}}$

23.  $\sqrt{\frac{100}{121}}$

# 1-6 Practice (continued)

24. **Writing** Explain the differences among  $\sqrt{25}$ ,  $-\sqrt{25}$ , and  $\pm\sqrt{25}$ .

25. **Reasoning** Can you name a real number that is represented by  $\sqrt{-36}$ ? Explain.

**Find each quotient. Simplify, if necessary.**

26.  $-51 \div 3$

27.  $-250 \div (-25)$

28.  $98 \div 2$

29.  $84 \div (-4)$

30.  $-93 \div (-3)$

31.  $\frac{-105}{5}$

32.  $14.4 \div (-3)$

33.  $-1.7 \div (-10)$

34.  $-8.1 \div 3$

35.  $17 \div \frac{1}{3}$

36.  $-\frac{3}{8} \div \left(-\frac{9}{10}\right)$

37.  $-\frac{5}{6} \div \frac{1}{2}$

**Evaluate each expression for  $a = -\frac{1}{2}$ ,  $b = \frac{3}{4}$ , and  $c = -6$ .**

38.  $-ab$

39.  $b \div c$

40.  $\frac{c}{a}$

41. **Writing** Explain how you know that  $-5$  and  $\frac{1}{5}$  are multiplicative inverses.

42. At 6:00 p.m., the temperature was  $55^\circ\text{F}$ . At 11:00 p.m. that same evening, the temperature was  $40^\circ\text{F}$ . What real number represents the average change in temperature per hour?