

1-6 Practice

Find each product. Simplify, if necessary.

1. $-5(-7)$

2. $8(-11)$

3. $9 \cdot 12$

4. $(-9)^2$

5. -3×12

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°F . At 11:00 p.m. that same evening, the temperature was 40°F . What real number represents the average change in temperature per hour?