2 CHAPTER TEST

Tell whether the number is a real number, a rational number, an irrational number, an integer, or a whole number.

1. $-\frac{1}{4}$ **2.** $\sqrt{90}$ **3.** $-\sqrt{144}$ **4.** 8.95

Order the numbers in the list from least to greatest.

5. $-\frac{5}{3}, -2, 3, \frac{1}{2}, -1.07$ **6.** $\sqrt{15}, -4.3, 4.2, 0, -\sqrt{25}$

Find the sum, difference, product, or quotient.

7. $-5 + 2$ **8.** $1.3 + (-10.4)$ **9.** $-\frac{1}{3} + \frac{1}{6}$ **10.** $-\frac{2}{7} - \frac{5}{14}$

11. $-41 - 32$ **12.** $7.2 - (-11.6)$ **13.** $-11(-7)$ **14.** $-4.5(20)(2)$

15. $-\frac{1}{5}(-20)(-5)$ **16.** $-36 \div (-6)$ **17.** $-\frac{3}{5} \div 12$ **18.** $5 \div \left(-\frac{10}{11}\right)$

Evaluate the expression when $x = -6$ and $y = -10$.

19. $-x$ **20.** $|y|$ **21.** $8 - (x - y)$ **22.** $-4x + y$

Simplify the expression.

23. $-9(y - 7)$ **24.** $8(x - 4) - 10x$ **25.** $\frac{-7w - 21}{7}$ **26.** $\frac{-16v + 8}{-4}$

In Exercises 27 and 28, rewrite the conditional statement in if-then form. Then tell whether the statement is *true* or *false*. If it is false, give a counterexample.

27. No rational numbers are integers.

28. All irrational numbers are real numbers.

29. MUSIC The revenue from sales of digital pianos in the United States was \$152.4 million in 2001 and \$149.0 million in 2002. Find the change in revenue from 2001 to 2002.

30. ELEVATORS An elevator moves at a rate of -5.8 feet per second from a height of 300 feet above the ground. It takes 3 seconds for the elevator to make its first stop. How many feet above the ground is the elevator now?

31. SUMMER JOBS You plan to work a total of 25 hours per week at two summer jobs. You will earn \$8.75 per hour working at a cafe and \$10.50 per hour working at an auto shop. Write an equation that gives your weekly pay p (in dollars) as a function of the time t (in hours) spent working at the cafe. Then find your weekly pay if you work 10 hours at the cafe.

32. TEMPERATURES The low temperatures for Montreal, Quebec, in Canada on February 12 for each year during the period 2000–2004 are $-6.7°$F, $-4.2°$F, $4.1°$F, $-3.6°$F, and $0.3°$F. Find the mean of the temperatures.