Practice and Problem Solving

⬤ = **Step-by-Step Solutions** begin on page R12.
Extra Practice begins on page 815.

Examples 1 and 2
pp. 111–112

Determine whether each pair of ratios are equivalent ratios. Write *yes* or *no*.

9. $\dfrac{9}{11}, \dfrac{81}{99}$

10. $\dfrac{3}{7}, \dfrac{18}{42}$

11. $\dfrac{8.4}{9.2}, \dfrac{8.8}{9.6}$

12. $\dfrac{4}{3}, \dfrac{6}{8}$

13. $\dfrac{29.2}{10.4}, \dfrac{7.3}{2.6}$

14. $\dfrac{39.68}{60.14}, \dfrac{6.4}{9.7}$

Example 3
p. 113

Solve each proportion. If necessary, round to the nearest hundredth.

15. $\dfrac{3}{8} = \dfrac{15}{a}$

16. $\dfrac{t}{2} = \dfrac{6}{12}$

17. $\dfrac{4}{9} = \dfrac{13}{q}$

18. $\dfrac{15}{35} = \dfrac{g}{7}$

19. $\dfrac{7}{10} = \dfrac{m}{14}$

20. $\dfrac{8}{13} = \dfrac{v}{21}$

21. $\dfrac{w}{2} = \dfrac{4.5}{6.8}$

22. $\dfrac{1}{0.19} = \dfrac{12}{n}$

23. $\dfrac{2}{0.21} = \dfrac{8}{n}$

24. $\dfrac{2.4}{3.6} = \dfrac{k}{1.8}$

25 $\dfrac{t}{0.3} = \dfrac{1.7}{0.9}$

26. $\dfrac{7}{1.066} = \dfrac{z}{9.65}$

27. $\dfrac{x-3}{5} = \dfrac{6}{10}$

28. $\dfrac{7}{x+9} = \dfrac{21}{36}$

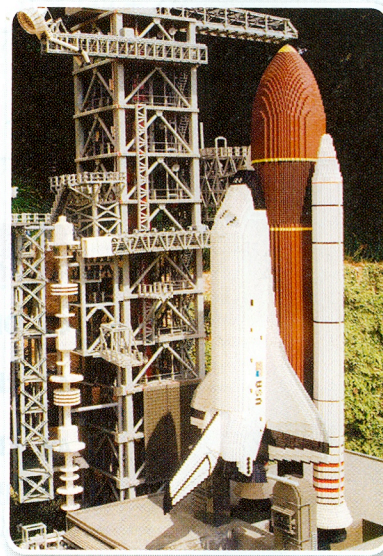29. $\dfrac{10}{15} = \dfrac{4}{x-5}$

Example 4
p. 113

30. **CAR WASH** The B-Clean Car Wash washed 128 cars in 3 hours. At that rate, how many cars can they wash in 8 hours?

Example 5
p. 114

31. **MENU** On Monday, a restaurant made $545 from selling 110 hamburgers. If they sold 53 hamburgers on Tuesday, how much did they make?

32. **MODELS** An artist used interlocking building blocks to build a scale model of Kennedy Space Center, Florida. In the model, 1 inch equals 1.67 feet of an actual space shuttle. The model is 110.3 inches tall. How tall is the actual space shuttle? Round to the nearest tenth.

33. **GEOGRAPHY** On a map of Florida, the distance between Jacksonville and Tallahassee is 7.5 centimeters. If 2 centimeters = 40 miles, what is the distance between the two cities?

Solve each proportion. If necessary, round to the nearest hundredth.

34. $\dfrac{6}{14} = \dfrac{7}{x-3}$

35. $\dfrac{7}{4} = \dfrac{f-4}{8}$

36. $\dfrac{3-y}{4} = \dfrac{1}{9}$

37. $\dfrac{4v+7}{15} = \dfrac{6v+2}{10}$

38. $\dfrac{9b-3}{9} = \dfrac{5b+5}{3}$

39. $\dfrac{2n-4}{5} = \dfrac{3n+3}{10}$

40. **ATHLETES** At Piedmont High School, 3 out of every 8 students are athletes. If there are 1280 students at the school, how many are not athletes?

41. **BRACES** Two out of five students in the ninth grade have braces. If there are 325 students in the ninth grade, how many have braces?

42. **PAINT** Joel used a half gallon of paint to cover 84 square feet of wall. He has 932 square feet of wall to paint. How many gallons of paint should he purchase?