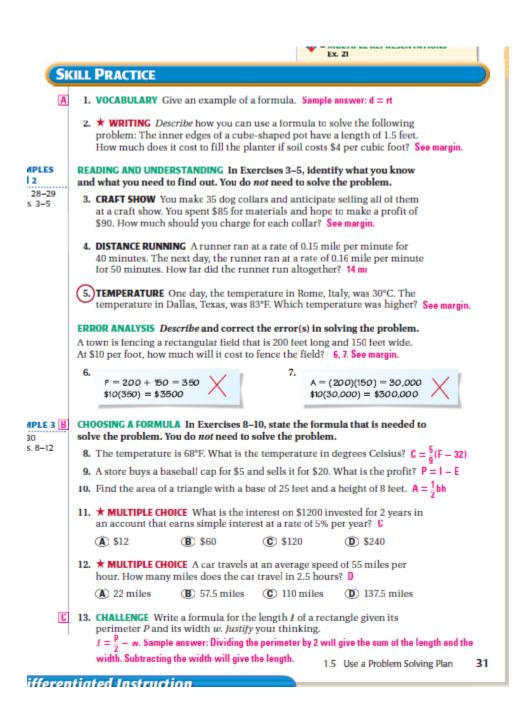
Page 31 and 38 answers

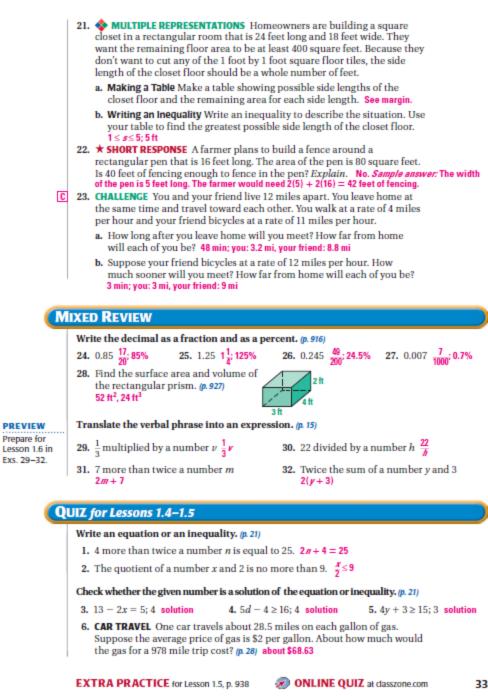


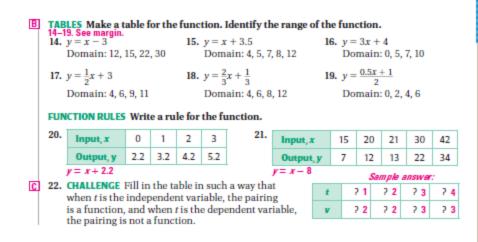
PROBLEM SOLVING

32

EXAMPLES A 1, 2, and 3 much would it cost to buy enough racks to hold 127 DVDs? \$126 on pp. 28-30 @HomeTirtor for problem solving help at classzone.com for Exs. 14-18 15. FRAMING For an art project, you make a square print with a side length of 8 inches. You make a frame using strips of wood 11/4 inches wide. What is the area of the frame? 110.25 in.2 (HomeTutar) for problem solving help at classzone.com 16. MOUNTAIN BOARDS You have saved \$70 to buy a mountain board that costs \$250. You plan to save \$10 each week. How many weeks will it take to save for the mountain board? 18 wk (17.) HIKING You are hiking. The total weight of your backpack and its contents is 13 $\frac{3}{8}$ pounds. You want to carry no more than 15 pounds. How many extra water bottles can you add to your backpack if each bottle weighs $\frac{3}{4}$ pound? 2 water bottles 18. PIZZA Thick crust pizza requires about 0.15 ounce of dough per square inch of surface area. You have two rectangular pans, one that is 16 inches long and 14 inches wide, and one that is 15.5 inches long and 10 inches wide. How much more dough do you need to make a thick crust pizza in the larger pan than in the smaller one? 10.35 oz 19. SONAR A diver uses a sonar device to determine the distance to her diving partner. The device sends a sound wave and records the time it takes for the wave to reach the diving partner and return to the device. Suppose the wave travels at a rate of about 4800 feet per second. a. The wave returns 0.2 second after it was sent. How far did the wave travel? 960 ft b. How far away is the diving partner? 480 ft B 20. * EXTENDED RESPONSE A gardener is reseeding a city park that has the shape of a right triangle with a base of 150 feet and a height of 200 feet. The third side of the park is 250 feet long. a. One bag of grass seed covers 3750 square feet and costs \$27.50. How many bags are needed? What is the total cost? 4 bags; \$110 b. Wire fencing costs \$23.19 for each 50 foot roll. How much does it cost to buy fencing to enclose the area? \$278.28 c. Fence posts cost \$3.19 each and should be placed every 5 feet. How many posts are needed, and how much will they cost altogether? Explain. See margin. = WORKED-OUT SOLUTIONS on p. WS1 * = STANDARDIZED = MULTIPLE TEST PRACTICE REPRESENTATIONS

14. DVD STORAGE A stackable storage rack holds 22 DVDs and costs \$21. How





PROBLEM SOLVING

EXAMPLE 5 A on p. 37 for Exs. 23–26 23a. the number of quarters left; the number of quarters used

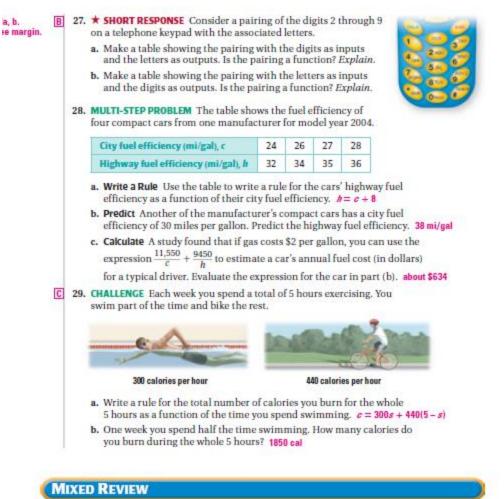
- a. Describing in Words Copy and complete: Each time you put 1 quarter in the meter, you have 1 less quarter, so <u>?</u> is a function of <u>?</u>.
- b. Writing a Rule Write a rule for the number y of quarters that you have left as a function of the number x of quarters you have used so far. Identify the domain of the function. y = 10 x; domain: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10
- c. Making a Table Make a table and identify the range of the function. *@HomeTutar* for problem solving help at classzone.com
 See margin.
- WULTIPLE REPRESENTATIONS At a yard sale, you find 5 paperback books by your favorite author. Each book is priced at \$.75.
 - a. Describing in Words Copy and complete: For each book you buy, you spend \$.75, so <u>?</u> is a function of <u>?</u>. amount of money you spend; the number of books you buy
 - b. Writing a Rule Write a rule for the amount (in dollars) you spend as a function of the number of books you buy. Identify the domain of the function. y = \$.75x; domain: 0, 1, 2, 3, 4, and 5
 - c. Making a Table Make a table and identify the range of the function.

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Range: 0, 0.75, 1.5, 2.25, 3, and 3.75; see margin.

25. SAVINGS You have \$100 saved and plan to save \$20 each month. Write a rule for the amount saved (in dollars) as a function of the number of months from now. Identify the independent and dependent variables, the domain, and the range. How much will you have saved altogether 12 months from now? y = 100 + 20m; independent variable: m, the number of months; dependent variable: y, the amount of money saved; domain: m > 0, range: y ≥ 100; \$340
26. • • OPEN-ENDED Write a function rule that models a real-world

situation. Identify the independent variable and the dependent variable. Sample answer: W = 8h, where W is wages and h is hours worked; the independent variable is h, the dependent variable is W.



PREVIEWPlot the point in a coordinate plane. (p. 921) 30–33. See margin.Prepare for
.esson 1.7 in
ixs. 30–33.30. A(1, 3)31. B(3, 1)32. C(2, 4)33. D(6, 2)Write an equation or an inequality. (p. 21)34. The difference of 13 and a number w is 5. 13 - w = 535. The quotient of 21 and a number d is no less than 7. $\frac{21}{d} \ge 7$ 36. TRAVEL On a 1375 mile flight, an airplane's average speed is 550 miles
per hour. The flight is within a single time zone and leaves at
10 A.M. What time will the airplane arrive at its destination? (p. 28) 12:30 P.M.