EE EXAMPLES 2. AND 3

n pp. 354-355 or Exs. 3-17

KEY

HOMEWORK + = **STANDARDIZED TEST PRACTICE** Exs. 17, 19, 32, 34, 36, 39, and 56

> = HINTS AND HOMEWORK HELP for Exs. 3, 7, 9, 13, 33 at classzone.com

SKILL PRACTICE

- 1. **VOCABULARY** Copy and complete: Another way to say "25 songs out of 100" is to say "25_? of the songs."
- **2. VOCABULARY** In the sentence "30 is 75% of 40," which number is the base?

USING PROPORTIONS Write a proportion to represent the percent problem. Then solve the proportion to answer the question.

- (3.) 209 is 38% of what number?
- 5. 5 is what percent of 125?
- 7.) What number is 45% of 245?

- **4.** 6 is what percent of 75?
- **6.** 481 is 52% of what number?
- **8.** What number is 30% of 120?

USING PROPORTIONS Use a percent proportion to answer the question.

- (9.)756 is what percent of 840?
- **11.** 918 is 170% of what number?
- (13.) 567 is what percent of 420?
- **15.** What number is 0.36% of 700?

- **10.** 39 is what percent of 50?
- **12.** 111 is what percent of 740?
- **14.** What number is 520% of 150?
- **16.** 179.2 is 32% of what number?
- 17. ★ MULTIPLE CHOICE How much is 20% of \$90?
 - **(A)** \$18
- **(B)** \$20
- **(C)** \$70
- **(D)** \$72
- **18. ERROR ANALYSIS** Describe and correct the error made in answering the following question: What percent of 60 is 12?
- 19. **TOPEN-ENDED MATH** Write three percent problems in which you find the percent, three in which you find the part, and three in which you find the base.

$$\frac{a}{b} = \frac{p}{100}$$

$$\frac{60}{12} = \frac{p}{100}$$

$$500 = p$$

$$500\% \text{ of } 60 \text{ is } 12.$$

NUMBER SENSE Copy and complete the statement using <, >, or =.

- **20.** 30% of 120 ? 120% of 30
- **22.** 15% of 140 ? 75% of 24
- **24.** 150% of 30 ? 75% of 48

- **21.** 20% of 80 ? 40% of 50
- **23.** 25% of 80 ? 125% of 12
- **25.** 10% of 400 ? 25% of 160
- **ALGEBRA** Solve the percent problem in terms of y.
- **26.** What number is 50% of 8*y*?

27. 3*y* is 60% of what number?

CHALLENGE Find the unknown number.

- **28.** 85% of 20% of what number is 34?
- **29.** 115% of 25% of what number is 46?

PROBLEM SOLVING

SEE EXAMPLES 1, 2, AND 3

on pp. 354-355 for Exs. 30-35

- **30. GUIDED PROBLEM SOLVING** You ask 356 people if they enjoy drawing. Of these people, 89 say they do like to draw. What percent of the people surveyed like to draw?
 - **a.** Write a percent proportion.
 - **b.** Substitute the known values for the variables.
 - **c.** Solve the proportion.
- **31. MARATHON** Of the 23,513 people who entered the Honolulu Marathon one year, 19,236 finished. What percent of the runners finished? Round your answer to the nearest tenth of a percent.
- **32.** ★ MULTIPLE CHOICE A bag of 150 stickers contains 28% blue, 26% red, 34% green, and 12% yellow stickers. Which proportion can be used to find g, the number of green stickers in the bag?

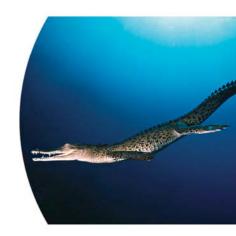
(A)
$$\frac{g}{100} = \frac{34}{150}$$

(A)
$$\frac{g}{100} = \frac{34}{150}$$
 (B) $\frac{34}{100} = \frac{g}{150}$ **(C)** $\frac{100}{150} = \frac{g}{34}$ **(D)** $\frac{34}{100} = \frac{150}{g}$

$$\bigcirc$$
 $\frac{100}{150} = \frac{g}{34}$

$$\bigcirc$$
 $\frac{34}{100} = \frac{150}{g}$

- (33.) WATER A child's body weight is approximately 75% water. About how many pounds of a 60 pound child's weight is water?
- **34.** ★ **SHORT RESPONSE** You read that 560 of the 875 students at your school belong to a school club. Write and solve a proportion to find the percent of students who belong to a club. Explain how you could use equivalent fractions and estimation to check your answer.
- **35. REPTILES** The largest crocodiles alive today are 24 feet in length. Recently, researchers found bones of an ancient crocodile. It was 167% as long as today's longest crocodiles. How much longer was the ancient crocodile than today's longest crocodile? Round to the nearest foot.
- **36.** \bigstar **WRITING** *Explain* how you might find 10% of 400 without writing a proportion.
- **37. NUMBER SENSE** One day, 32 of 80 people wore a red shirt to school. What percent of the 80 people did *not* wear a red shirt to school?



- **38. QUIZ SCORES** You earned 32 points on a quiz. Your score was 80%. What was the maximum number of points on the quiz? How many more points would you have needed to earn a score of 90%? Explain.
- **39.** \bigstar **OPEN-ENDED MATH** *Describe* a real-world situation where a percent greater than 100% can be used.
- **40. DINOSAURS** You buy a scale model of a Dilophosaurus for your brother. The scale of the model is 1 inch to 3 feet 4 inches. To the nearest percent, what percent of the actual height is the model's height?