

7.3 EXERCISES

HOMEWORK KEY

★ = **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

- VOCABULARY** Copy and complete: Another way to say “25 songs out of 100” is to say “25 of the songs.”
- 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.

- 209 is 38% of what number?
- 5 is what percent of 125?
- What number is 45% of 245?
- 6 is what percent of 75?
- 481 is 52% of what number?
- What number is 30% of 120?

USING PROPORTIONS Use a percent proportion to answer the question.

- 756 is what percent of 840?
- 918 is 170% of what number?
- 567 is what percent of 420?
- What number is 0.36% of 700?
- 39 is what percent of 50?
- 111 is what percent of 740?
- What number is 520% of 150?
- 179.2 is 32% of what number?

- ★ **MULTIPLE CHOICE** How much is 20% of \$90?

(A) \$18 (B) \$20 (C) \$70 (D) \$72

- ERROR ANALYSIS** Describe and correct the error made in answering the following question: *What percent of 60 is 12?*

- ★ **OPEN-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 =.

- 30% of 120 120% of 30
- 15% of 140 75% of 24
- 150% of 30 75% of 48
- 20% of 80 40% of 50
- 25% of 80 125% of 12
- 10% of 400 25% of 160

xy ALGEBRA Solve the percent problem in terms of y.

- What number is 50% of 8y?
- 3y is 60% of what number?

CHALLENGE Find the unknown number.

- 85% of 20% of what number is 34?
- 115% of 25% of what number is 46?

SEE EXAMPLES
2, AND 3
on pp. 354–355
or Exs. 3–17

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?
- Write a percent proportion.
 - Substitute the known values for the variables.
 - 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)** $\frac{g}{100} = \frac{34}{150}$ **(B)** $\frac{34}{100} = \frac{g}{150}$ **(C)** $\frac{100}{150} = \frac{g}{34}$ **(D)** $\frac{34}{100} = \frac{150}{g}$
- 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. ★ 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. ★ 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?

