

Lesson 6 Homework Practice

Solve Proportional Relationships

Solve each proportion.

$$1. \frac{b}{5} = \frac{8}{16} \quad \mathbf{2.5}$$

$$2. \frac{18}{x} = \frac{6}{10} \quad \mathbf{30}$$

$$3. \frac{t}{6} = \frac{30}{36} \quad \mathbf{5}$$

$$4. \frac{11}{10} = \frac{n}{14} \quad \mathbf{15.4}$$

$$5. \frac{2.5}{35} = \frac{2}{d} \quad \mathbf{28}$$

$$6. \frac{3.5}{18} = \frac{z}{36} \quad \mathbf{7}$$

$$7. \frac{0.45}{4.2} = \frac{p}{14} \quad \mathbf{1.5}$$

$$8. \frac{2.4}{6} = \frac{2.8}{s} \quad \mathbf{7}$$

$$9. \frac{3.6}{k} = \frac{0.2}{0.5} \quad \mathbf{9}$$

For Exercises 10–12, assume all situations are proportional.

- 10. CLASSES** For every girl taking classes at the martial arts school, there are 3 boys who are taking classes at the school. If there are 236 students taking classes, write and solve a proportion to predict the number of boys taking classes at the school.

$$\frac{3}{4} = \frac{x}{236}; \mathbf{177 \text{ boys}}$$

- 11. BICYCLES** An assembly line worker at Rob's Bicycle factory adds a seat to a bicycle at a rate of 2 seats in 11 minutes. Write a proportion relating the number of seats s to the number of minutes m . At this rate, how long will it take to add 16 seats? 19 seats?

$$\frac{2}{11} = \frac{s}{m}; \mathbf{88 \text{ min or } 1 \text{ h } 28 \text{ min; } 104.5 \text{ min or } 1 \text{ h } 44 \text{ min } 30 \text{ s}}$$

- 12. PAINTING** Lisa is painting a fence that is 26 feet long and 7 feet tall. A gallon of paint will cover 350 square feet. Write and solve a proportion to determine how many gallons of paint Lisa will need.

$$\frac{350 \text{ ft}^2}{1 \text{ gal}} = \frac{182 \text{ ft}^2}{x \text{ gal}} \text{ or } \frac{350}{1} = \frac{182}{x}; \mathbf{0.52 \text{ gal}}$$