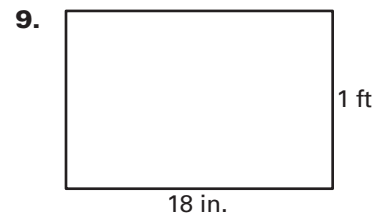**LESSON 6.1** **Practice B**
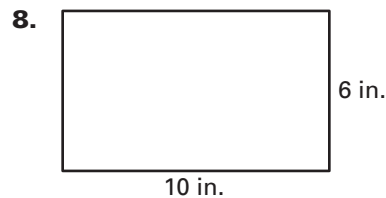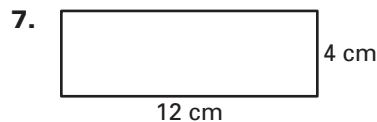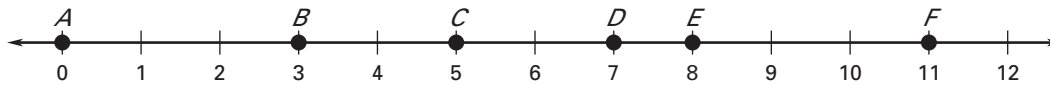*For use with pages 356–363*

Simplify the ratio.

1. $12 : $16

2. $\dfrac{32 \text{ in.}^2}{8 \text{ in.}^2}$

3. $\dfrac{6 \text{ cm}}{14 \text{ cm}}$

4. $\dfrac{10 \text{ in.}}{2 \text{ ft}}$

5. 3 gallons : 10 quarts

6. 28 oz : 2 lb

Find the ratio of the width to the length of the rectangle. Then simplify the ratio.

7.

4 cm

12 cm

8.

6 in.

10 in.

9.

1 ft

18 in.

Use the number line to find the ratio of the distances.

10. $\dfrac{AB}{CF}$

11. $\dfrac{BF}{CD}$

12. $\dfrac{DE}{AC}$

13. $\dfrac{BE}{AD}$

14. Perimeter The perimeter of a rectangle is 56 inches. The ratio of the length to the width is 6 : 1. Find the length and the width.

15. Area The area of a rectangle is 525 square centimeters. The ratio of the length to the width is 7 : 3. Find the length and the width.

The measures of the angles of a triangle are in the extended ratio given. Find the measures of the angles of the triangle.

16. 1 : 7 : 10

17. 5 : 6 : 7

18. 7 : 14 : 15

Solve the proportion.

19. $\dfrac{4}{5} = \dfrac{x}{15}$

20. $\dfrac{5}{8} = \dfrac{20}{y}$

21. $\dfrac{z + 2}{4} = \dfrac{27}{12}$

22. $\dfrac{3}{x} = \dfrac{1}{x - 6}$

23. $\dfrac{3}{m + 5} = \dfrac{2}{m + 1}$

24. $\dfrac{2}{k - 1} = \dfrac{5}{3k - 4}$

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Practice B *continued*
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Find the geometric mean of the two numbers.

25. 2 and 8　　　　　　**26.** 3 and 9　　　　　　**27.** 7 and 14

28. 8 and 16　　　　　**29.** 10 and 12　　　　　**30.** 9 and 13

Let $x = 6$, $y = 3$, and $z = 2$. Write the ratio in simplest form.

31. $\dfrac{2x + y}{3}$　　　　**32.** $\dfrac{4z - 3}{x}$　　　　**33.** $\dfrac{z + 2y}{2x - 4}$

Solve the proportion.

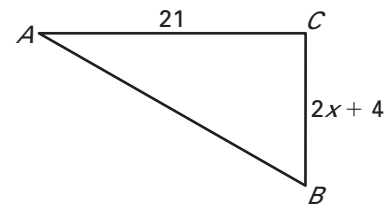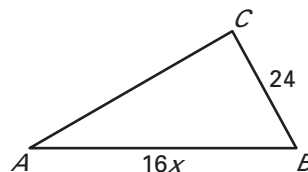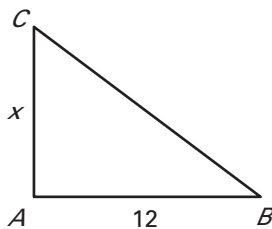**34.** $\dfrac{12}{x} = \dfrac{x}{4}$　　　**35.** $\dfrac{y - 2}{2} = \dfrac{2y - 3}{5}$　　　**36.** $\dfrac{8}{z - 2} = \dfrac{z + 2}{4}$

In Exercises 37–39, the ratio of two side lengths for the triangle is given. Solve for the variable.

37. $AC : AB$ is $3 : 4$.　　　**38.** $AB : CB$ is $2 : 1$.　　　**39.** $AC : BC$ is $7 : 4$.

40. Area The perimeter of the rectangular front lawn of the library is 192 feet. The ratio of the length to the width is $5 : 3$. Find the area of the lawn.

In Exercises 41 and 42, use the following information.

Golden Gate Bridge You purchase a scale model of the Golden Gate Bridge, which is located near San Francisco, California. The model states that the scale is 1 inch : 50 feet. The actual length of the bridge is 8980 feet.

41. What is the length of the model?

42. The model is approximately 15 inches tall. What is the actual height of the bridge?

Geometry
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