

LESSON
6.1**Practice C**

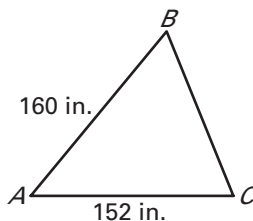
For use with pages 356–363

Simplify the ratio.

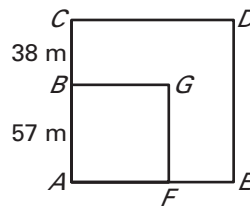
1. 1 oz : 2 qt 2. $\frac{2 \text{ cups}}{1 \text{ gallon}}$ 3. 4 seconds : 1 year 4. 7 qt : 550 gallons

Find the ratio of AB to AC in simplest form.

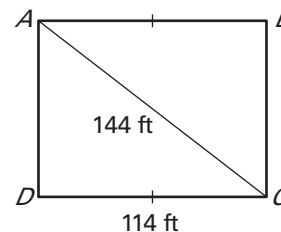
5.



6.



7.

**Let $x = 8$, $y = 6$, and $z = 5$. Write the ratio in simplest form.**

8. $3z : 2y$ 9. $2z : y + x$ 10. $\frac{3z + 2y}{4z}$ 11. $\frac{(x + y) - z}{2y}$

The perimeter and the ratio of the length to the width of a rectangle are given. Find the length and width of the rectangle.

12. Perimeter: 132 cm
 $l : w = 7 : 4$ 13. Perimeter: 280 ft
 $l : w = 11 : 9$ 14. Perimeter: 420 yd
 $l : w = 17 : 13$

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

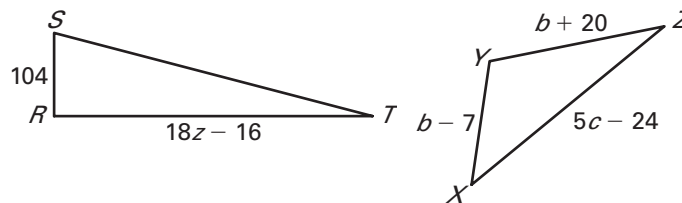
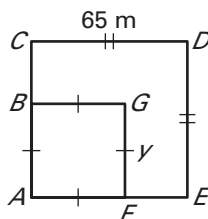
15. 2 : 5 : 5 16. 3 : 7 : 10 17. 7 : 16 : 22

Solve the proportion.

18. $\frac{7}{12} = \frac{x}{48}$ 19. $\frac{11}{a} = \frac{55}{75}$ 20. $\frac{14}{y-5} = \frac{2}{3}$
21. $\frac{2z}{27} = \frac{3z+9}{81}$ 22. $\frac{48}{68} = \frac{b+2}{b+7}$ 23. $\frac{9}{s} = \frac{s}{16}$
24. $\frac{19}{32} = \frac{7d+3}{15d-11}$ 25. $\frac{x}{111} = \frac{5x-28}{333}$ 26. $\frac{4x}{6x+4} = \frac{x}{25}$

Use the given ratio and information in the figure to find the value of the variable(s).

27. $CD : AB = 5 : 3$ 28. $RS : RT = 13 : 25$ 29. $XY : YZ : XZ = 7 : 10 : 14$



LESSON
6.1**Practice C** *continued*
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Find the geometric mean of the two numbers.

30. 6 and 24

31. 7 and 28

32. 4 and 12

33. 9 and 12

34. 15 and 45

35. 12 and 48

The area and the ratio of the length to the width of a rectangle are given. Find the length and width of the rectangle.

36. Area: 192 ft^2
 $l : w = 1 : 3$

37. Area: 294 yd^2
 $l : w = 3 : 2$

The three coordinate points are collinear. Use slopes to write a proportion to find the value of a .

38. $(-4, 1), (-1, 2), (5, a)$

39. $(4, 5), (1, 2), (a, 0)$

40. Rectangles The ratio of the length to the width of one rectangle is proportional to the ratio of the length to the width of a smaller rectangle. Describe the circumstances for which this proportion involves a geometric mean.

41. Carpet Cleaning A carpet cleaning solution calls for a mixture of 1 ounce of cleaner per 2 quarts of water. You use a total of 13 gallons of water in mixing the solution according to these directions. How much cleaning solution do you use?

42. Sports Training Over a given period of time, you can lose weight if your body burns more Calories than it consumes. Specifically, it takes a difference of 3500 Calories to lose 1 pound of body weight. Suppose your total body weight decreases by 42 ounces while you are training for a sport. How many more Calories has your body burned than it has consumed during this time?

43. Currency Exchange You and a friend win a free trip to Europe. The plane trip includes a layover in Canada before continuing service to Europe. At the time of your trip, the currency exchange rates are 1 U.S. dollar per 1.14 Canada dollar and 1 U.S. dollar per 0.84 Euros.

- During the layover, you purchase a book that costs \$20 in Canadian currency. How much does the book cost in U.S. dollars?
- Once you arrive in Europe, you exchange \$80 in U.S. currency. How many Euros do you get for that amount?
- Your friend exchanges \$25 in Canadian currency for Euros. How many Euros does your friend receive?