

**LESSON**  
**6.1****Practice C**

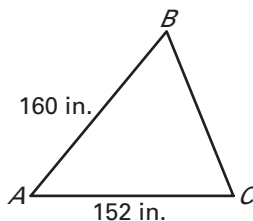
For use with pages 356–363

**Simplify the ratio.**

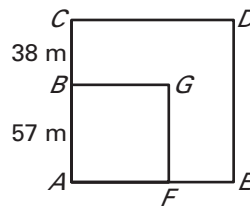
1. 1 oz : 2 qt      2.  $\frac{2 \text{ cups}}{1 \text{ gallon}}$       3. 4 seconds : 1 year      4. 7 qt : 550 gallons

**Find the ratio of  $AB$  to  $AC$  in simplest form.**

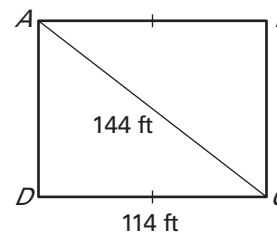
5.



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.**

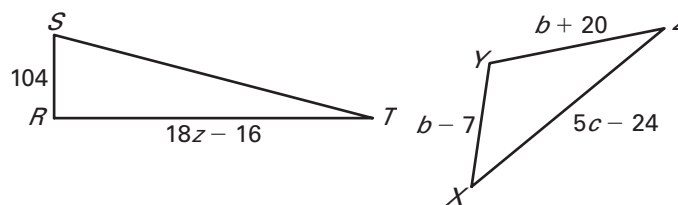
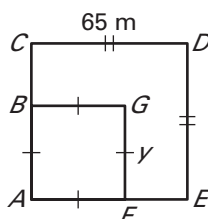
15. 2 : 5 : 5      16. 3 : 7 : 10      17. 7 : 16 : 22

**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:  $192 \text{ ft}^2$   
 $l : w = 1 : 3$

37. Area:  $294 \text{ yd}^2$   
 $l : w = 3 : 2$

**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?