

**CHAPTER 6** **Chapter Test C**  
For use after Chapter 6

**Simplify the ratio.**

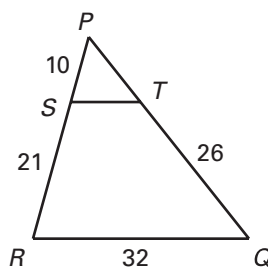
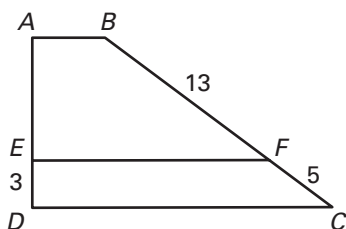
1.  $\frac{3 \text{ gallons}}{27 \text{ quarts}}$       2.  $\frac{500 \text{ mm}}{2.5 \text{ m}}$       3.  $\frac{150 \text{ lb}}{100 \text{ oz}}$

**Solve the proportion.**

4.  $\frac{6}{13} = \frac{3x}{91}$       5.  $\frac{x+6}{x} = \frac{5}{4}$       6.  $\frac{3}{10} = \frac{5x+1}{18x-6}$

**Use the diagram and the given information to find the unknown length.**

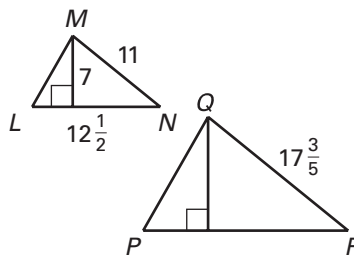
7. Given  $\frac{BC}{CF} = \frac{AD}{DE}$ , find  $AE$ .      8. Given  $\frac{PR}{PS} = \frac{RQ}{ST}$ , find  $ST$ .



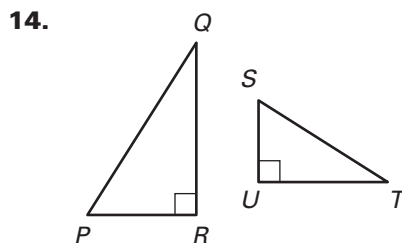
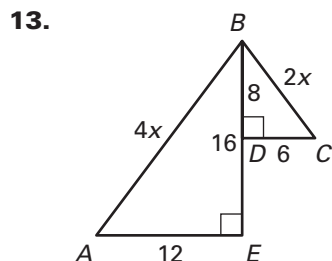
9. The lengths of the legs of right triangle  $FGH$  are 12 meters and 16 meters. The shortest side of  $\triangle JKL$  is 2.4 meters and  $\triangle JKL \sim \triangle FGH$ . How long is the hypotenuse of  $\triangle JKL$ ?

**In the diagram,  $\triangle LMN \sim \triangle PQR$ .**

10. Find the scale factor of  $\triangle PQR$  to  $\triangle LMN$ .  
11. Find the length of the altitude shown in  $\triangle PQR$ .  
12. Estimate the lengths of  $LM$  and  $PQ$ . Round your answers to the nearest tenth.



**In Exercises 13–16, determine whether the triangles are similar. If they are, write a similarity statement.**



**Answers**

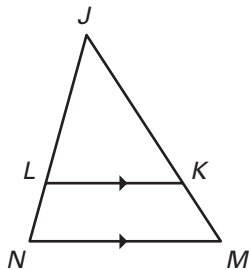
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_

**CHAPTER 6**

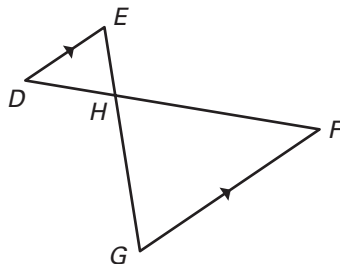
**Chapter Test C** *continued*

*For use after Chapter 6*

15.



16.



**Answers**

15. \_\_\_\_\_

\_\_\_\_\_

16. \_\_\_\_\_

\_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

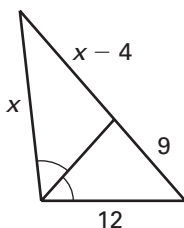
21. See left.

22. See left.

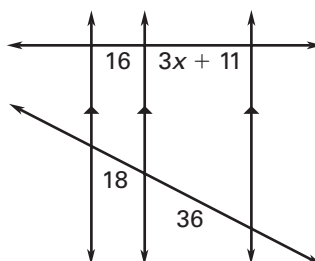
23. \_\_\_\_\_

**Find the value of  $x$ .**

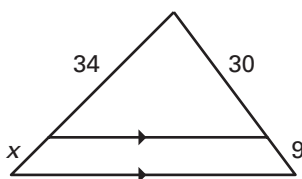
17.



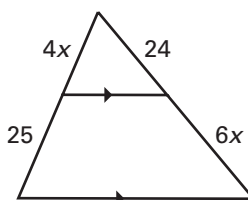
18.



19.



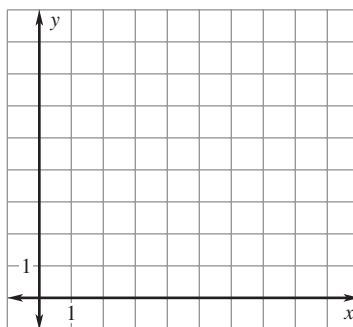
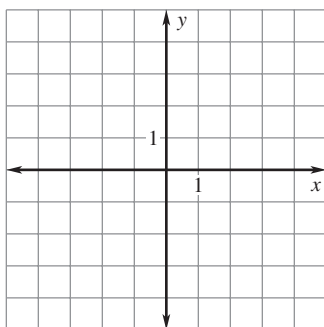
20.



**Draw a dilation of the polygon with the given vertices using the given scale factor  $k$ .**

21.  $A(-12, -6), B(-6, -3), C(-3, 6), D(-12, 6); k = \frac{1}{6}$

22.  $A(0, 0), B(0, 2), C(2, 2), D(4, 0); k = 2.25$



23. You take 450 U.S. dollars to the bank to exchange for European euros. The exchange rate on that day is about 0.82 euros per U.S. dollar. How many European euros did you get for the 450 U.S. dollars?