

Lesson 7-1

Solve each proportion.

1. $\frac{3}{x+2} = \frac{2}{7}$

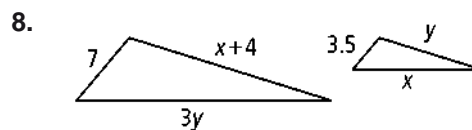
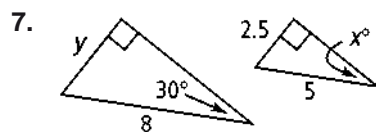
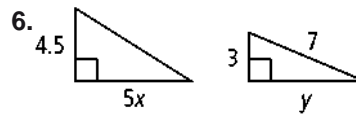
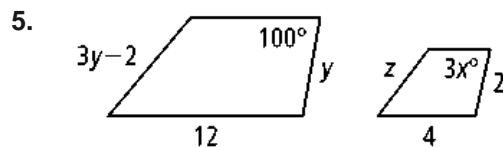
2. $\frac{4}{5} = \frac{x-3}{9}$

3. $\frac{12}{x} = \frac{4}{2x-5}$

4. The measures of two complementary angles are in the ratio 7 : 11. What is the measure of the smaller angle?

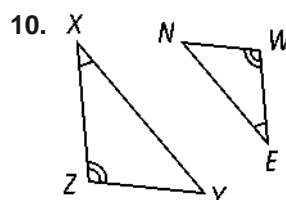
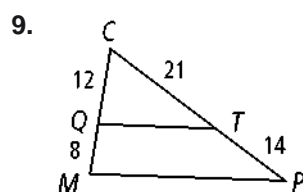
Lesson 7-2

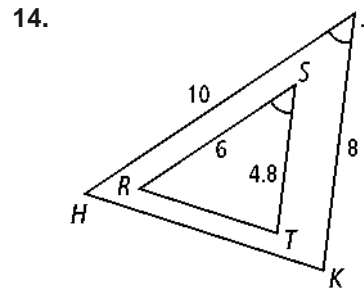
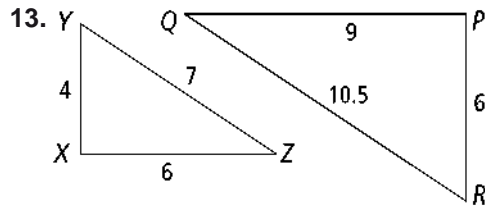
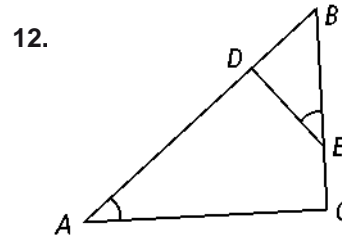
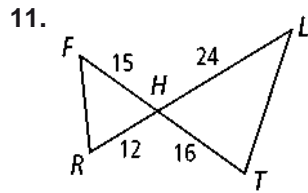
The polygons are similar. Find the values of the variables.



Lesson 7-3

Can you prove that the triangles are similar? If so, write a similarity statement and tell whether you would use AA ~, SAS ~, or SSS ~.





15. You want to determine the height of your school building. The building casts a 6-foot shadow at the same time you cast a 15-inch shadow. If you are 5 feet tall, how tall is the school building? HINT: DRAW A PICTURE!!!

Lesson 7-4

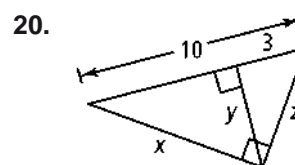
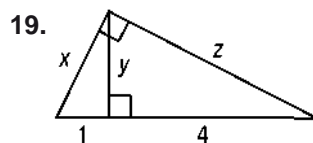
Find the geometric mean for each pair of numbers.

16. 9 and 16

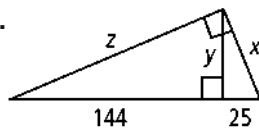
17. 5 and 80

18. 8 and 32

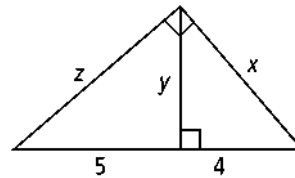
Find the value of each variable. If an answer is not a whole number round to three decimal places.



21.



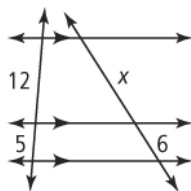
22.



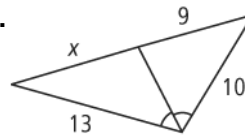
Lesson 7-5

Find the value of x .

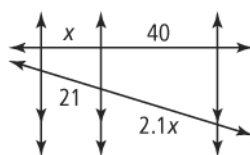
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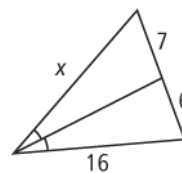
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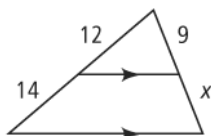
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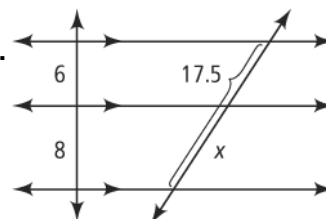
26.



27.



28.



29. The figure below shows the locations of a high school, a computer store, a library, and a convention center. The street along which the computer store and library are located bisects the obtuse angle formed by two of the other streets. Use the information in the figure to find the distance from the library to the convention center.

