Geometry

Chapter 7 Study Guide

Answers should be left in simple radical form or fractions in lowest terms.

Solve each proportion.

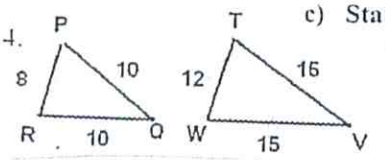
1. $\frac{4}{5} = \frac{x}{20}$

2. $\frac{6}{x} = \frac{10}{7}$

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

Are the triangles similar? a) If yes, explain, show necessary work. If no, also explain.
b) If similar, write a similarity statement.
c) State the theorem or postulate used to prove similarity.

4.



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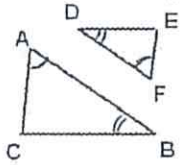

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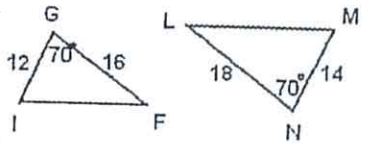
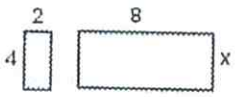


The figures are similar. Find the value of the variables.

7.



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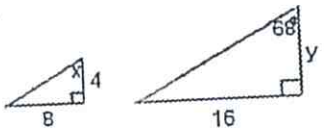


9. A meter stick is held perpendicular to the ground, casting a shadow that is 1.5 m long. At the same time nearby, a telephone pole casts a shadow that is 9 m long. How tall is the telephone pole?

Find the geometric mean of each pair of numbers.

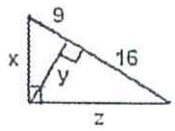
10. 10 & 15

11. 4 & 9

12. 6 & 48

Find the value of the variable(s).

13.



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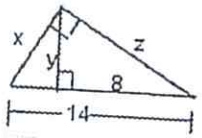

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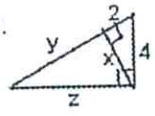

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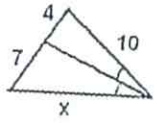

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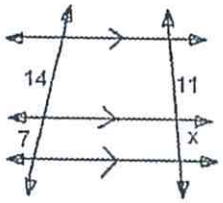

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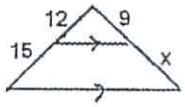

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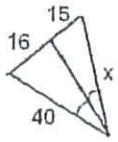

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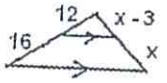

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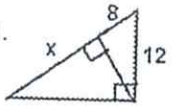

Write the ratio of the size of the dollhouse item to the size of the real item.

22. dollhouse sofa: 1.5 inches long
real sofa: 6 ft long

23. dollhouse piano: 2 inches high
real piano: 3 ft 6 in high