

**GUIDED PRACTICE**

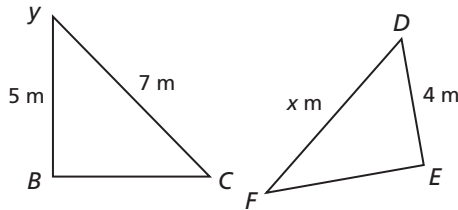
1. **Vocabulary** What does it mean for two figures to be *similar*?

SEE EXAMPLE 1

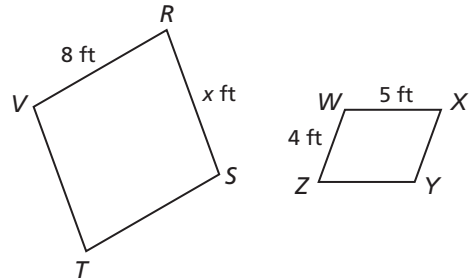
Find the value of  $x$  in each diagram.

p. 121

2.  $\triangle ABC \sim \triangle DEF$



3.  $RSTV \sim WXYZ$



SEE EXAMPLE 2

p. 122

4. Roger is 5 feet tall and casts a shadow 3.5 feet long. At the same time, the flagpole outside his school casts a shadow 14 feet long. Write and solve a proportion to find the height of the flagpole.

SEE EXAMPLE 3

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5. A rectangle has length 12 feet and width 8 feet. Every dimension of the rectangle is multiplied by  $\frac{3}{4}$  to form a similar rectangle. How is the ratio of the areas related to the ratio of corresponding sides?

**PRACTICE AND PROBLEM SOLVING**

**Independent Practice**

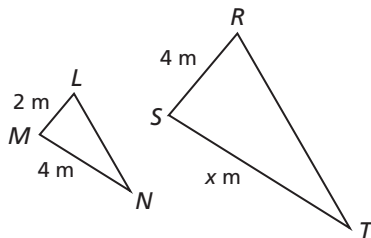
For Exercises	See Example
6-7	1
8	2
9	3

**Extra Practice**

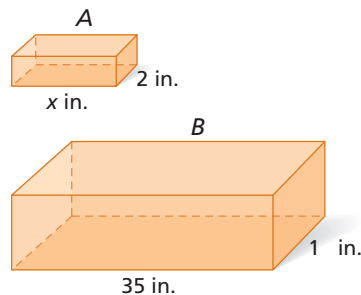
Skills Practice p. S7  
 Application Practice p. S29

Find the value of  $x$  in each diagram.

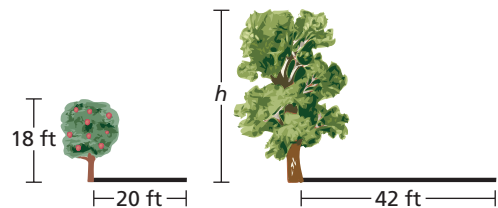
6.  $\triangle LMN \sim \triangle RST$



7. prism A  $\sim$  prism B



- Write and solve a proportion to find the height of the taller tree in the diagram at right.
- A triangle has side lengths of 5 inches, 12 inches, and 15 inches. Every dimension is multiplied by  $\frac{1}{5}$  to form a new triangle. How is the ratio of the perimeters related to the ratio of corresponding sides?



10. **Hobbies** For a baby shower gift, Heather crocheted a baby blanket whose length was  $2\frac{1}{2}$  feet and whose width was 2 feet. She plans to crochet a proportionally larger similar blanket for the baby's mother. If she wants the length of the mother's blanket to be  $6\frac{1}{4}$  feet, what should the width be? Show that your answer is reasonable.