

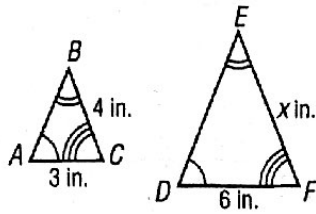
# 6-7 Skills Practice

## Similar Figures

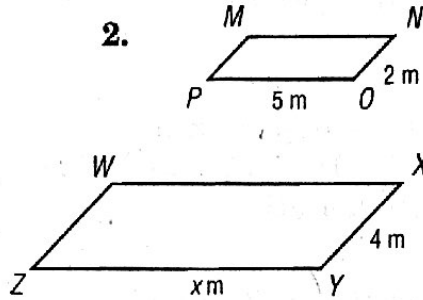


In Exercises 1-10, the figures are similar. Find each missing measure.

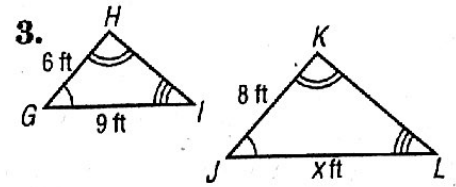
1.



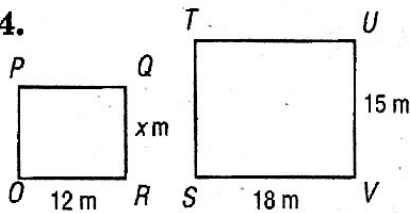
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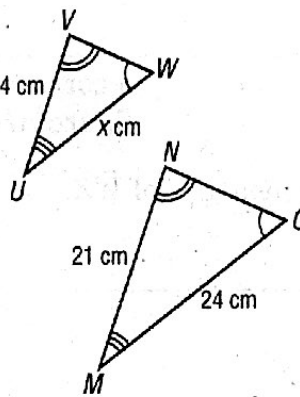
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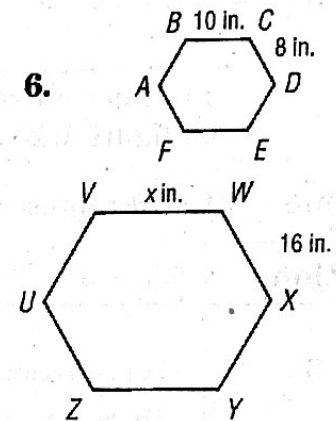
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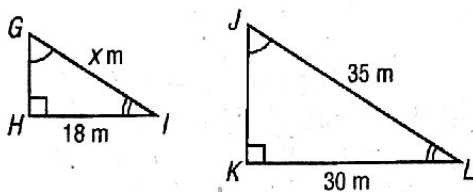
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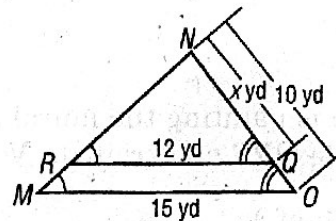
6.



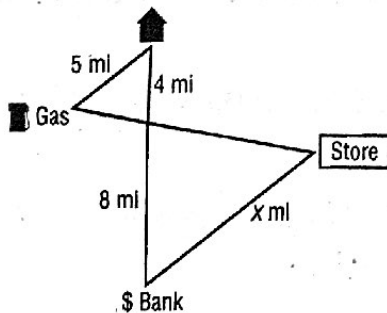
7.



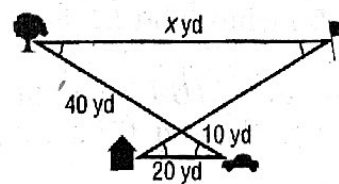
8.



9. How far is the store from the bank?



10. How far is the tree from the flagpole?



## 6-7

## Study Guide and Intervention

(continued)

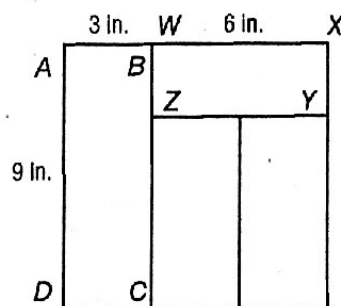
## Similar Figures

**Scale Factors** The scale factor is the ratio of a length on a scale drawing to the corresponding length on the real object. It is also the ratio of corresponding sides in similar figures.

**Example** **QUILTS** Paula is making a quilt. She designed the block shown at the right. If rectangle  $ABCD$  is similar to rectangle  $WZYX$ , find the length of segment  $WZ$ .

Find the scale factor from figure  $ABCD$  to figure  $WZYX$  by finding the ratio of corresponding sides with known lengths.

scale factor:  $\frac{AD}{WX} = \frac{9}{6}$  or 1.5



**Words** 1.5 times a length is a corresponding length on figure  $WZYX$  on figure  $ABCD$

**Variable** Let  $m$  represent the measure of  $\overline{WZ}$ .

**Equation**  $1.5m = 3$

$$1.5m = 3$$

Write the equation.

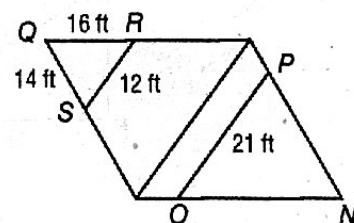
$$m = 2$$

Divide each side by 1.5.

So, the length of  $\overline{WZ}$  is 2 inches.

## Exercises

1. **ART** The art club is painting the mural shown at the right on a wall. Triangle  $QRS$  and triangle  $NOP$  are similar.
  - a. Find the length of  $\overline{NO}$ .
  - b. Find the length of  $\overline{PN}$ .



2. **GEOMETRY** Triangle  $JKL$  is similar to triangle  $DEF$ . What is the value of  $\overline{KL}$  if  $\overline{JL}$  is 15 inches,  $\overline{DF}$  is 5 inches, and  $\overline{EF}$  is 9 inches?
3. **GEOMETRY** Trapezoid  $GHIJ$  is similar to trapezoid  $RSTU$ . What is the value of  $\overline{ST}$  if  $\overline{HI}$  is 6 yards,  $\overline{IJ}$  is 9 yards, and  $\overline{TU}$  is 27 yards?
4. **GEOMETRY** Rectangle  $CDEF$  is similar to rectangle  $KLMN$ . What is the value of  $\overline{EF}$  if  $\overline{CD}$  is 3 meters,  $\overline{KL}$  is 16.5 meters, and  $\overline{MN}$  is 38.5 meters?