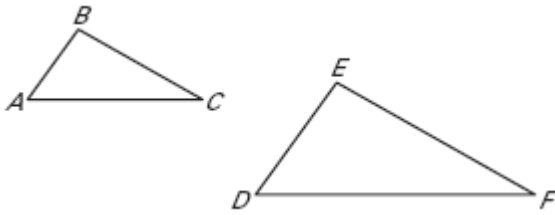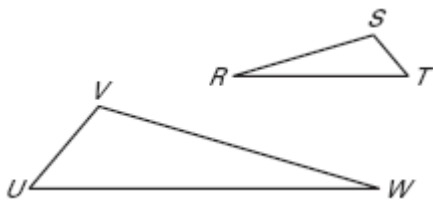Assignment 50 LESSON 6.1

List all pairs of congruent angles for the figures. Then write the ratios of the corresponding sides in a statement of proportionality.
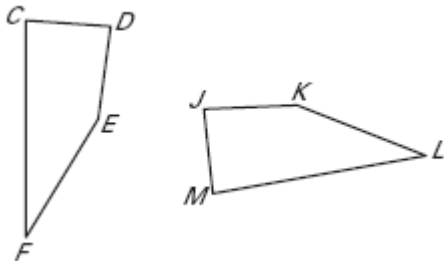
1. Δ *ABC* ~ Δ *DEF*

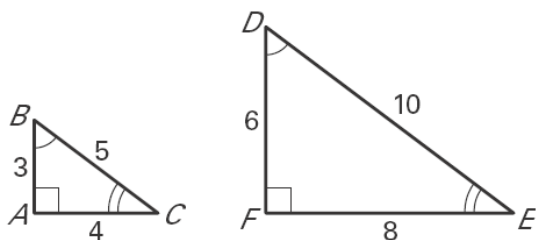**2.** Δ *RST* ~ Δ *WVU*

3. *CDEF* ~ *MJKL*
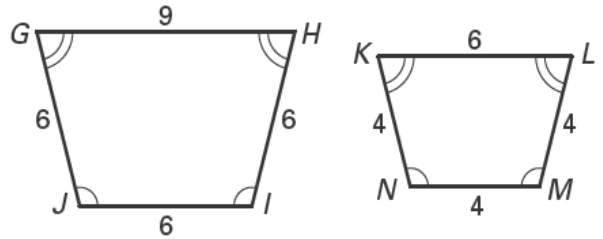

4. *PQRS* ~ *ZWXY*
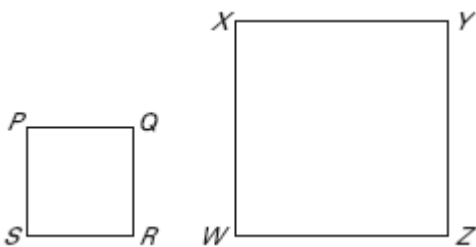
Determine whether the polygons are similar. If they are, write a similarity statement and find the scale factor.

5.
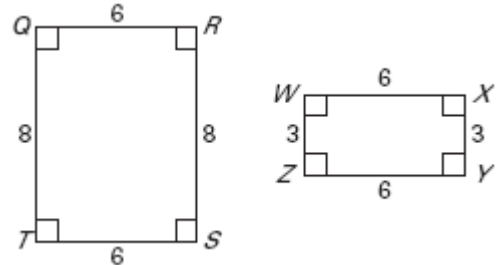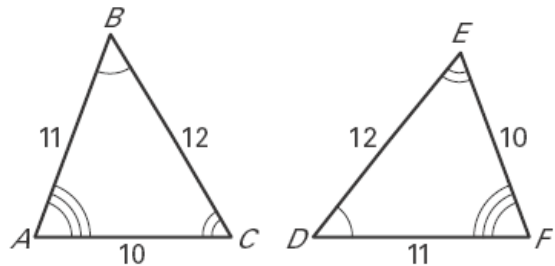

6.

7.

8.

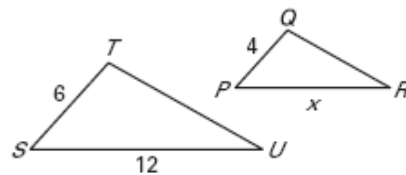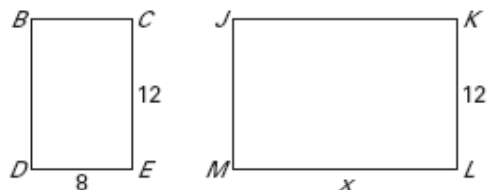The polygons are similar as indicated. Find the value of *x*.
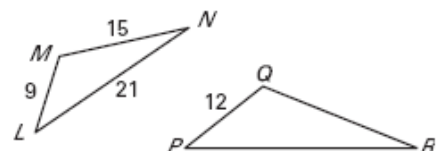
9. Δ *STU* ~ Δ*PQR*
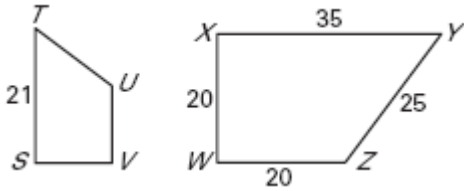

10. *BCDE* ~ *KLMJ*

Use the similarity statement to find the scale factor of the polygon on the left to the polygon on the right. Then find the perimeter of each polygon.
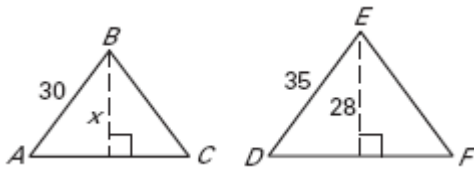
11. Δ*LMN* ~ Δ*PQR*

12. *STUV ~ XYZW*
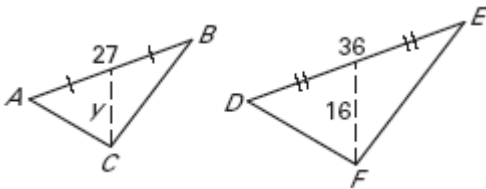

In the figure, ΔABC ~ ΔDEF. Indicate what type of special segments are shown as dashed lines. Then find the value of the variable.
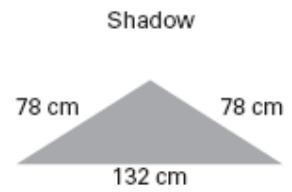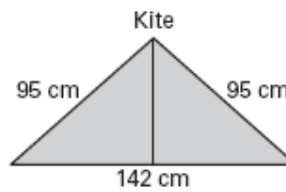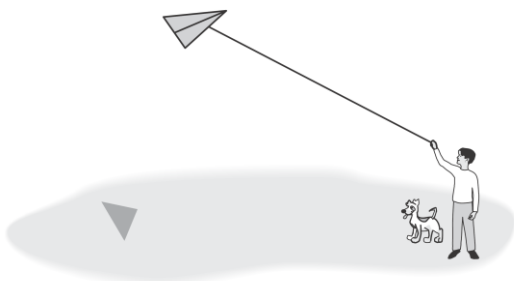
13.

14.

15. Kites You are flying a kite on a sunny day. The kite has the side lengths shown in the figure below at the right. The kite's shadow has the side lengths shown in the figure below at the right.

Kite

95 cm   95 cm

142 cm

Shadow

78 cm   78 cm

132 cm

Is the shadow similar to the kite? *Explain* your reasoning