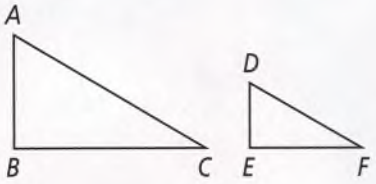
Practice and Problem-Solving Exercises

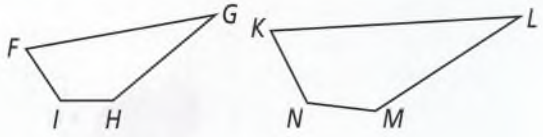
MATHEMATICAL PRACTICES

A Practice The figures in each pair are similar. Identify the corresponding sides and angles. See Problem 1.

6. $\triangle ABC \sim \triangle DEF$

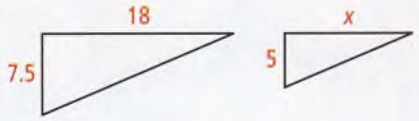


7. $FGHI \sim KLMN$

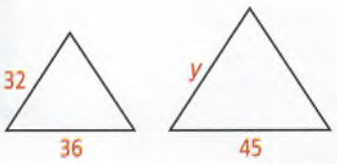


The figures in each pair are similar. Find the missing length.

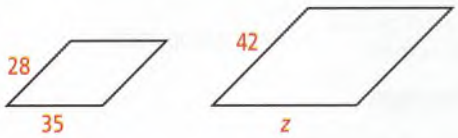
8.



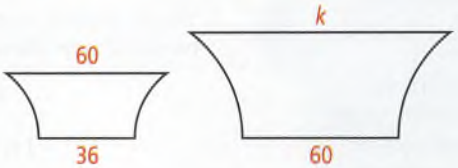
9.



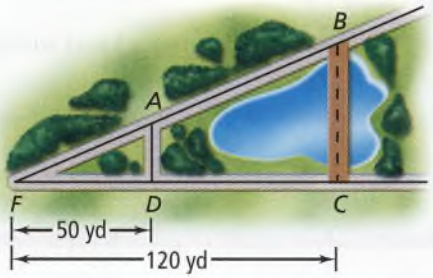
10.



11.



12. Bridges In the diagram of the park, $\triangle ADF \sim \triangle BCF$. The crosswalk at point A is about 20 yd long. A bridge across the pond will be built, from point B to point C. What will the length of the bridge be?



See Problem 2.

The scale of a map is 1 cm : 15 km. Find the actual distance corresponding to each map distance. See Problem 3.

13. 2.5 cm **14.** 0.2 cm **15.** 15 cm **16.** 4.6 cm

17. Movies A professional model-maker is building a giant scale model of a house fly to be used in a science fiction film. An actual fly is about 0.2 in. long with a wingspan of about 0.5 in. The model fly for the movie will be 27 ft long. What will its wingspan be? See Problem 4.

18. Maps Abbottsville and Broken Branch are 175 mi apart. On a map, the distance between the two towns is 2.5 in. What is the scale of the map?