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5-7 Similar Figures and Proportions

Use the similar triangles to the to name
the following.

1. corresponding side to $\overline{AC}$ _____

2. corresponding side to $\overline{EF}$ _____

3. corresponding angle to $\angle ACB$ _____

4. corresponding angle to $\angle EDF$ _____

5. Are the pentagons similar? _____
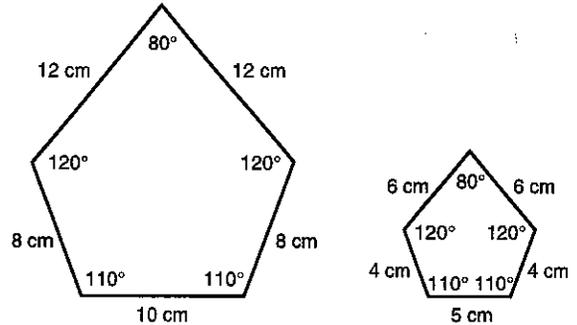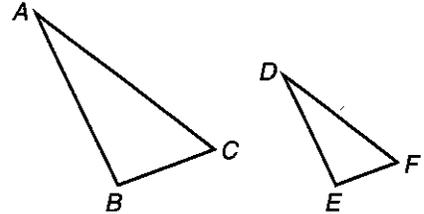
## 5-8 Using Similar Figures Show work.

6. Araxi has a photo of her cat that is 6 inches by 4 inches.
   She ordered a copy reduced to a width of 2 inches for
   her wallet. What is the length of the reduced copy?

   _____

7. Two hot-air balloons are heading for their landing
   target, as shown below. How high is the balloon
   closest to the target?

   _____
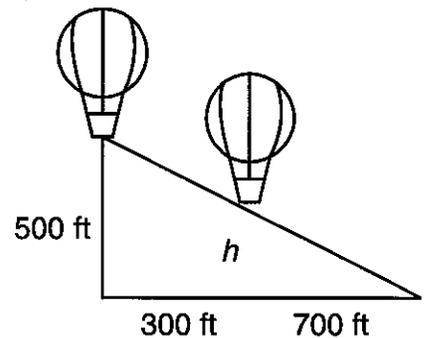
8. A company sells two trapezoid-shaped jigsaw puzzles with the
   same picture and the same shape, as shown below. What is the
   length, s, of the side in the larger version of the puzzle?

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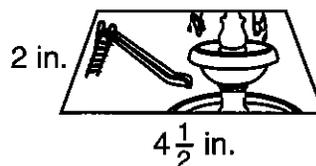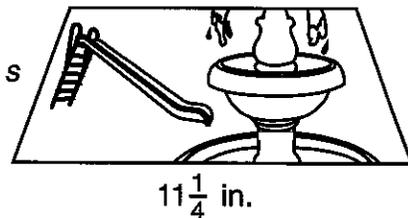
5-9 Scale Drawings and Scale Models Show work.

9. The wingspan of an airplane is 108 feet. On a scale
   model of the airplane, the wingspan is 3 feet. What is
   the scale factor?   _____

10. In Angel Stadium, located in Anaheim, California, the distance
    from home plate to the left field wall is 330 ft. What will that
    distance be in a diagram of the field with a scale factor of $\frac{1}{200}$?

    _____

11. On a map, the distance from one city to another
    measures about 5.3 cm. What is the approximate
    distance between those two cities if the map scale is
    1 cm = 50 km.   _____

12. The blueprint of the Nguyen house is done with a scale factor
    of $\frac{1}{16}$. If the length of a bedroom measures 8.5 in. on the
    diagram, what is the approximate length of the actual bedroom?

    _____

13. What is the exact scale factor of the model of a bridge,
    if the distance from end to end of the model is 5 in.
    and that same distance on the actual bridge is 120 ft? _____

14. A scale model of Tyrannosaurus Rex has a scale factor
    of $\frac{1}{36}$ and a height of 6 inches. How tall would it the
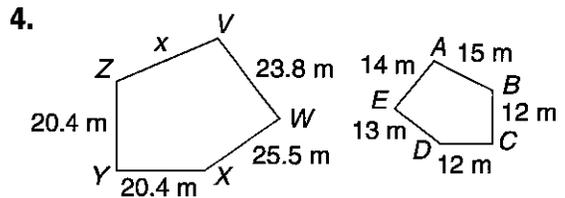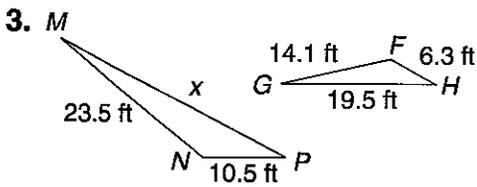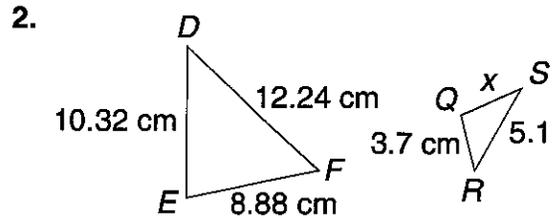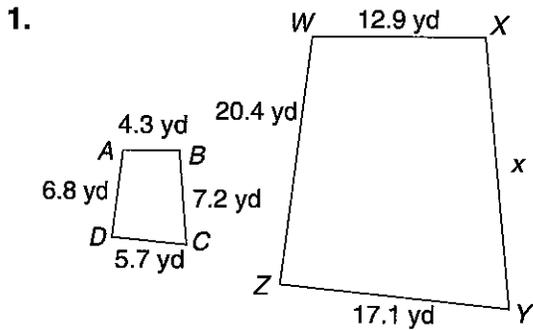   actual dinosaur be?   _____

15. The distance between Dallas, Texas, and Denver,
    Colorado, measures 10 cm on a map. The actual
    distance is 663 miles. What would be the approximate
    map measurement for the distance between Dallas
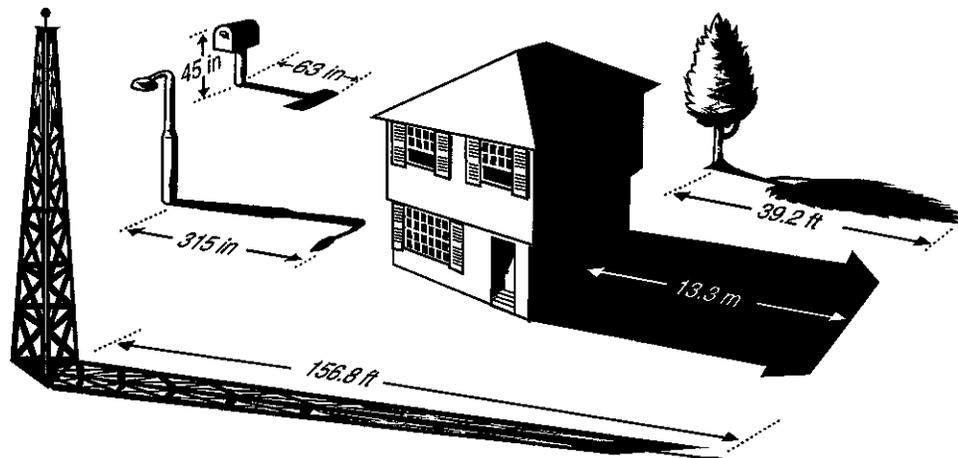   and El Paso, Texas, which lie 572 miles apart?   _____

Holt Mathematics

LESSON 5-8 Practice C
Using Similar Figures

Find the unknown length in each pair of similar figures.

1.

W   12.9 yd   X

4.3 yd   20.4 yd
A ┌─┐ B
6.8 yd │ │ 7.2 yd
D └─┘ C
   5.7 yd

x

Z
   17.1 yd   Y

2.

D
10.32 cm   12.24 cm   Q   x   S
E   8.88 cm   F   3.7 cm   R   5.1

3. M

14.1 ft   F   6.3 ft
   x   G ─────── H
23.5 ft   19.5 ft

N   10.5 ft   P

4.

   x   V
Z   23.8 m   14 m   A   15 m
                      E   B
20.4 m   W   13 m   12 m
         25.5 m   D   C
Y   20.4 m   X   12 m

Estimate the height of each object in the picture below.

45 in   63 in

315 in

39.2 ft

13.3 m

156.8 ft

5. house _____

6. tree _____

7. lamppost _____

8. radio tower _____

Holt Mathematics

SIMILAR TRIANGLES

1. Triangle ABC is similar to Triangle DEF. Use a proportion to determine the value of *x*.

B

8   14

A   C   D   F

E

6   *x*
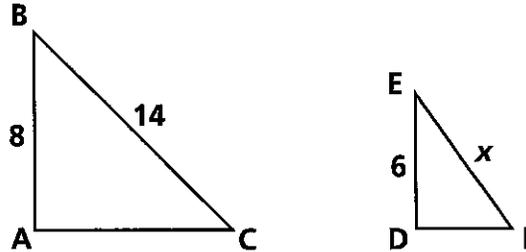
2. The two triangles are similar. Use a proportion to determine the value of *h*. Round your answer to the nearest tenth.

h

103

32

34.5
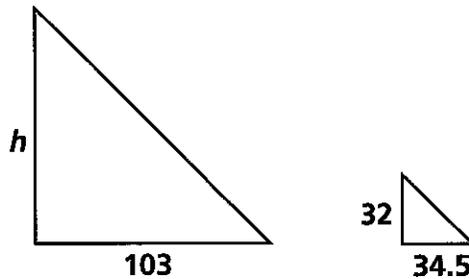
3. If a flagpole is 20 ft tall and casts a shadow of 27 ft, how tall is a building that casts a shadow of 185 ft? Write a proportion and solve. Round your answer to the nearest foot.

x ft

185 ft

20

27
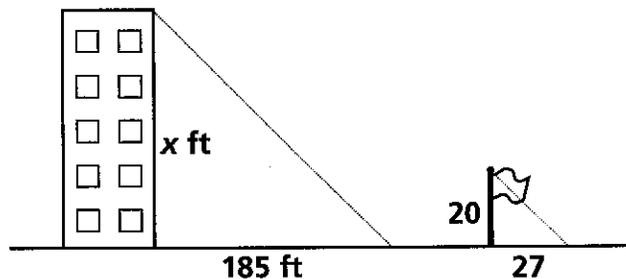
4. If an Egyptian man is 5 feet tall and casts a shadow of 6 ft, how tall is a pyramid that casts a shadow of 576 ft? Write a proportion and solve.

x

576 ft

5 ft

6 ft