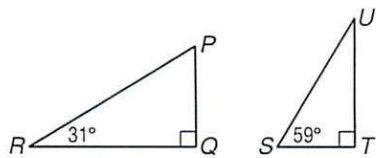


# 10-6 Practice

## Similar Triangles

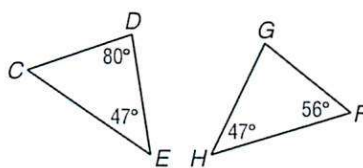
Determine whether each pair of triangles is similar. Justify your answer.

1.



yes

2.



NO

$$\frac{d}{e} = \frac{b}{e} = \frac{c}{f}$$

For each set of measures given, find the measures of the missing sides if  $\triangle ABC \sim \triangle DEF$ .

3.  $c = 4, d = 12, e = 16, f = 8$

$a = 6, b = 8$

4.  $e = 20, a = 24, b = 30, c = 15$

$d = 16, f = 10$

5.  $a = 10, b = 12, c = 6, d = 4$

$e = 4.8, f = 2.4$

6.  $a = 4, d = 6, e = 4, f = 3$

$b = \frac{8}{3}, c = 2$

7.  $b = 15, d = 16, e = 20, f = 10$

$a = 12, c = 7.5$

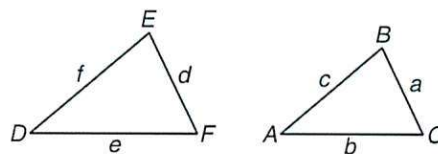
8.  $a = 16, b = 22, c = 12, f = 8$

$d = 10\frac{2}{3}, e = 14\frac{2}{3}$

9.  $a = \frac{5}{2}, b = 3, f = \frac{11}{2}, e = 7$

$d = \frac{35}{6}, c = \frac{33}{14}$

10.  $c = 4, d = 6, e = 5.625, f = 12$



11. **SHADOWS** Suppose you are standing near a building and you want to know its height. The building casts a 66-foot shadow. You cast a 3-foot shadow. If you are 5 feet 6 inches tall, how tall is the building?

$$\frac{5.5}{3} = \frac{x}{66}$$

$x = 121$

12. **MODELS** Truss bridges use triangles in their support beams. Molly made a model of a truss bridge in the scale of 1 inch = 8 feet. If the height of the triangles on the model is 4.5 inches, what is the height of the triangles on the actual bridge?

$$\frac{1''}{8'} = \frac{4.5''}{x}$$

$x = 36'$