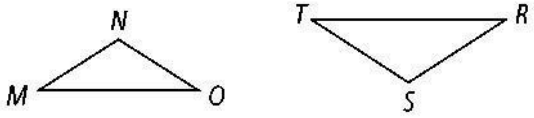
Name _____ Class Date

HW-31 Practice

Similar Polygons

List the pairs of congruent angles and the extended proportion that relates the corresponding sides for the similar polygons.

1. *MNO* ~ *RST*



Determine whether the polygons are similar.

2. an equilateral triangle with side length 6 and an equilateral triangle with side length 15

3. a triangle with side lengths 3 cm, 4 cm, and 5 cm, and a triangle with side lengths 18 cm, 19 cm, and 20 cm

4. An architect is making a scale drawing of a building. She uses the scale 1 in. = 15 ft.
   a. If the building is 48 ft tall, how tall should the scale drawing be?

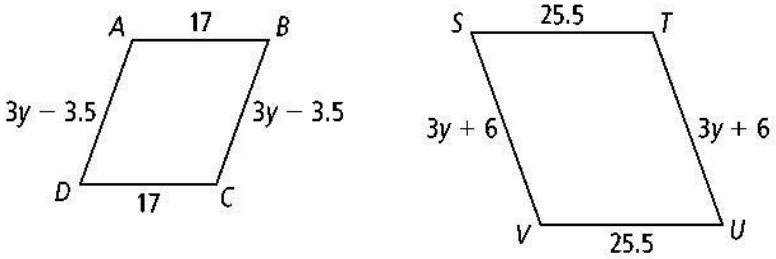
5. A scale drawing of a building was made using the scale 15 cm = 120 ft. If the scale drawing is 45 cm tall, how tall is the actual building?

Determine whether each statement is *always*, *sometimes*, or *never* true.

5. Two squares are similar.
6. Two hexagons are similar.
7. Two similar triangles are congruent.
8. A rhombus and a pentagon are similar.

Algebra Find the value of *y*. Give the scale factor of the polygons.

11. *ABCD* ~ *TSVU*



In the diagram below, *PRQ* ~ *DEF*. Find

6. the scale factor of *PRQ* to *DEF*