

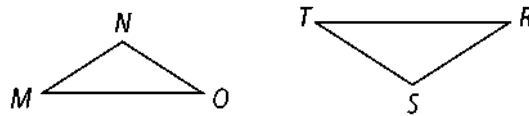
7-2 Practice

Similar Polygons

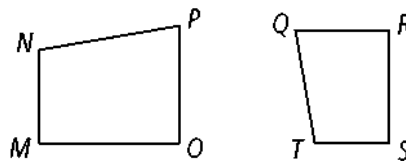
Form G

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

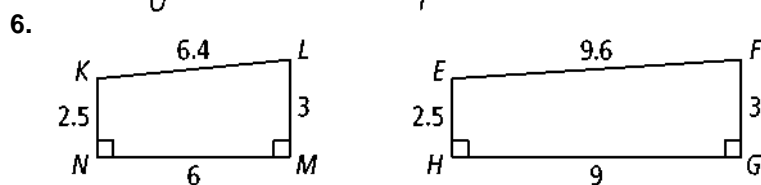
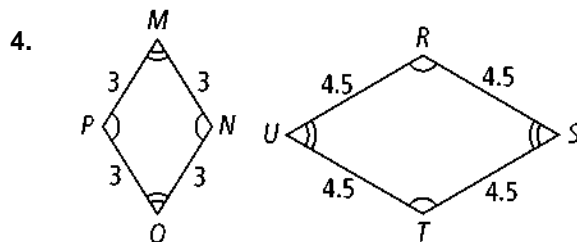
2. $\triangle MNO \sim \triangle RST$



3. $NPOM \sim TQRS$



Determine whether the polygons are similar. If so, write a similarity statement and give the scale factor. If not, explain.



Determine whether the polygons are similar.

7. an equilateral triangle with side length 6 and an equilateral triangle with side length 15
9. 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

7-2

Practice (continued)

Form G

Similar Polygons

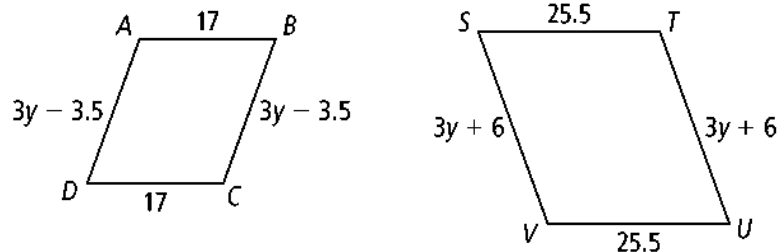
11. An architect is making a scale drawing of a building. She uses the scale 1 in. = 15 ft.
- If the building is 48 ft tall, how tall should the scale drawing be?
 - If the building is 90 ft wide, how wide should the scale drawing be?
12. A scale drawing of a building was made using the scale 15 cm = 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.

13. Two squares are similar.
14. Two hexagons are similar.
15. Two similar triangles are congruent.
16. A rhombus and a pentagon are similar.

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

17. $ABCD \sim TSVU$



18. The scale factor of $RSTU$ to $VWXY$ is 14 : 3. What is the scale factor of $VWXY$ to $RSTU$?

In the diagram below, $\triangle PRQ \sim \triangle DEF$. Find each of the following.

19. the scale factor of $\triangle PRQ$ to $\triangle DEF$

20. $m\angle D$

21. $m\angle R$

22. $m\angle P$

23. DE

24. FE

