NAME _____ DATE _____

Practice A

For use with pages 677–682

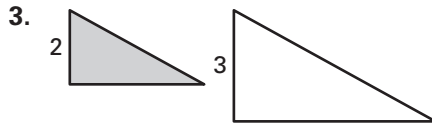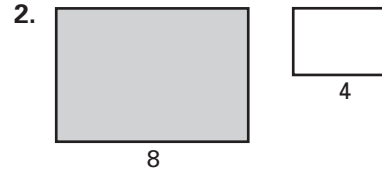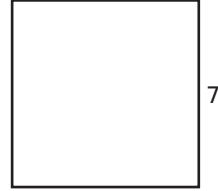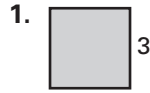**The polygons shown are similar. Find the ratio (shaded to unshaded) of their perimeters and of their areas.**

1.

3

7

2.

8

4

3.

2

3

4.

6

4
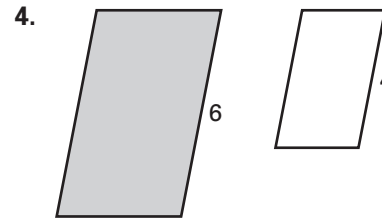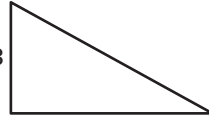
Complete the statement using *always*, *sometimes*, or *never*.

5. Two similar quadrilaterals ___?___ have the same perimeter.

6. Two squares with the same perimeter are ___?___ similar.

7. Two regular hexagons are ___?___ similar.

8. Two right triangles with the same area are ___?___ similar.

Solve.

9. The ratio of the lengths of corresponding sides of two similar triangles is 5:8. What is the ratio of their areas?

10. The ratio of the areas of two similar triangles is 16:9. What is the ratio of the lengths of corresponding sides?

11. A regular pentagon has an area of 48 square centimeters. Find the scale factor of this pentagon to a similar pentagon that has an area of 75 square centimeters.

12. The ratio of the lengths of corresponding sides of two similar rectangles is 3:5. The smaller rectangle has an area of 36 square centimeters. What is the area of the larger rectangle?

In Exercises 13–15, use the diagram of the room and a ruler. The scale is 1 centimeter to 1 meter.

13. Use a ruler to approximate the dimensions of the room.

14. What are the dimensions of the actual room?

15. Show that the area of the model to the area of the actual room is 1 cm^2 to 1 m^2.