

Lesson 13 Practice Problems

1. In each pair, some of the angles of two triangles in degrees are given. Use the information to decide if the triangles are similar or not. Explain how you know.

◦ Triangle A: 53, 71, ___; Triangle B: 53, 71, ___

◦ Triangle C: 90, 37, ___; Triangle D: 90, 53, ___

◦ Triangle E: 63, 45, ___; Triangle F: 14, 71, ___

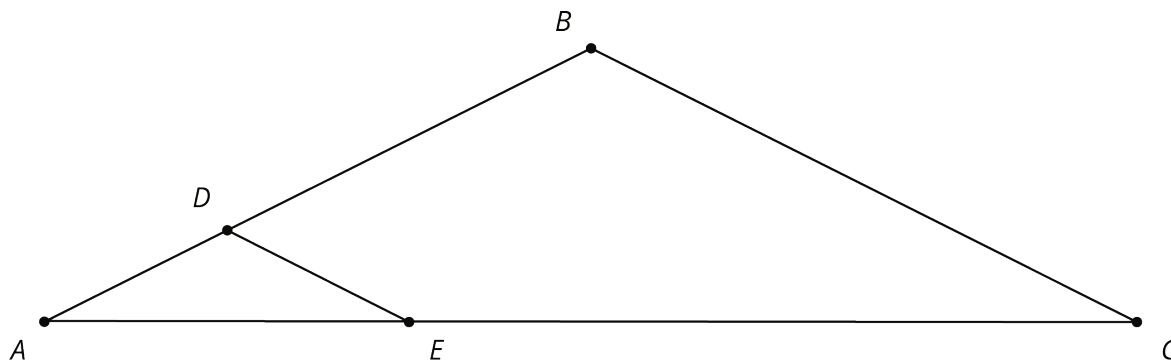
◦ Triangle G: 121, ___, ___; Triangle H: 70, ___, ___

2. a. Draw two equilateral triangles that are not congruent.

b. Measure the side lengths and angles of your triangles. Are the two triangles similar?

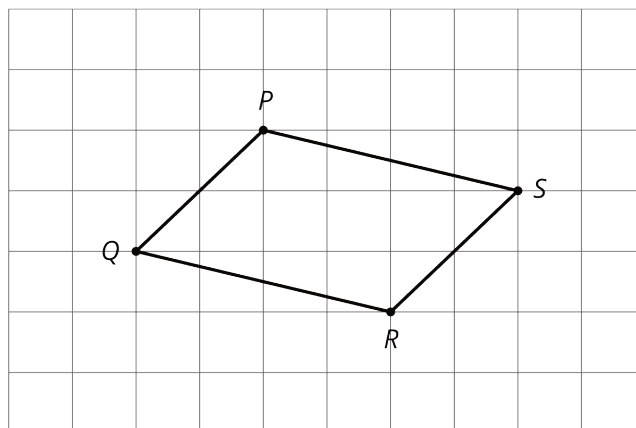
c. Do you think two equilateral triangles will be similar *always*, *sometimes*, or *never*? Explain your reasoning.

3. In the figure, line BC is parallel to line DE .



Explain why $\triangle ABC$ is similar to $\triangle ADE$.

4. The quadrilateral $PQRS$ in the diagram is a parallelogram. Let $P'Q'R'S'$ be the image of $PQRS$ after applying a dilation centered at a point O (not shown) with scale factor 3.

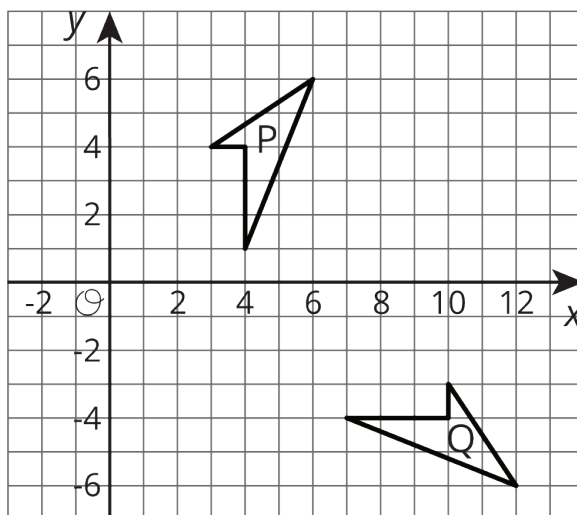


Which of the following is true?

- A. $P'Q' = PQ$
- B. $P'Q' = 3PQ$
- C. $PQ = 3P'Q'$
- D. Cannot be determined from the information given

(From Unit 2, Lesson 10.)

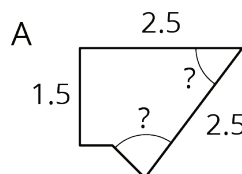
5. Describe a sequence of transformations for which Quadrilateral P is the image of Quadrilateral Q.



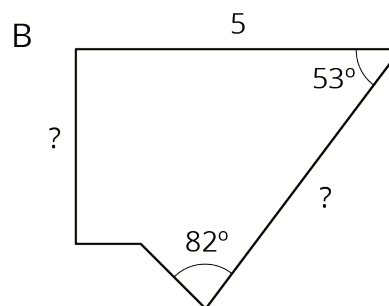
(From Unit 1, Lesson 5.)

6. Polygon B is a scaled copy of Polygon A.

- a. What is the scale factor from Polygon A to Polygon B? Explain your reasoning.



- b. Find the missing length of each side marked with ? in Polygon B.



- c. Determine the measure of each angle marked with ? in Polygon A.

(From Unit 2, Lesson 2.)