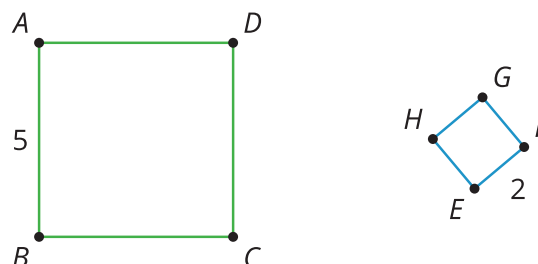


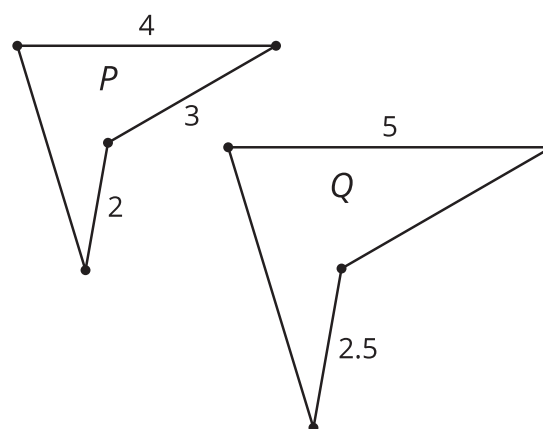
Lesson 6 Practice Problems

1. Find a sequence of rigid motions and dilations that takes square $ABCD$ to square $EFGH$.



2. Quadrilaterals Q and P are similar.

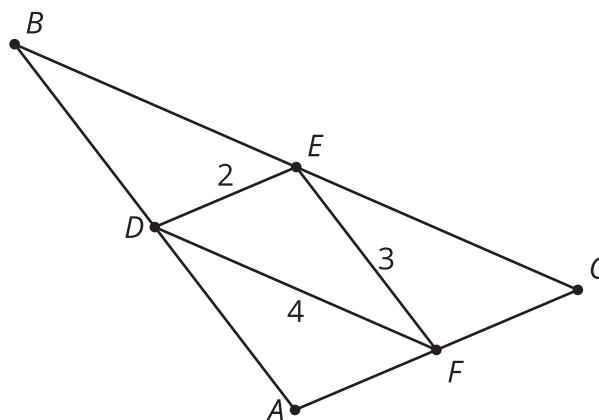
- What is the scale factor of the dilation that takes P to Q ?
- What is the scale factor of the dilation that takes Q to P ?



3. What is our definition of similarity?

- If 2 figures have the same angles, then they are similar.
- If 2 figures have proportional side lengths, then they are similar.
- If there is a sequence of rigid transformations taking one figure to another, then they are similar.
- If there is a sequence of rigid transformations and dilations that take one figure to the other, then they are similar.

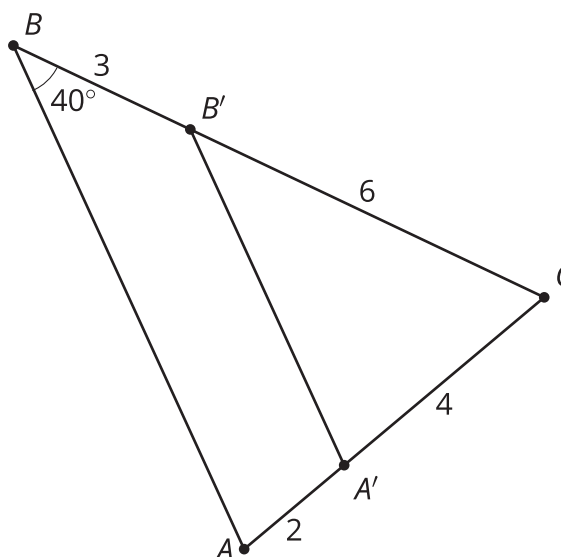
4. Triangle DEF is formed by connecting the midpoints of the sides of triangle ABC . The lengths of the sides of DEF are shown. What is the length of BC ?



- A. 3 units
- B. 4 units
- C. 6 units
- D. 8 units

(From Unit 3, Lesson 5.)

5. If AB is 12, what is the length of $A'B'$?

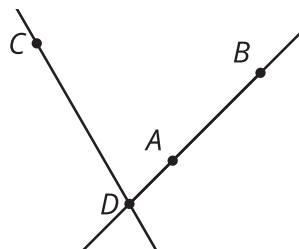


(From Unit 3, Lesson 5.)

6. Right angle ABC is taken by a dilation with center P and scale factor $\frac{1}{2}$ to angle $A'B'C'$. What is the measure of angle $A'B'C'$?

(From Unit 3, Lesson 4.)

7. a. Dilate point C using center D and scale factor $\frac{3}{4}$.
 b. Dilate segment AB using center D and scale factor $\frac{1}{2}$.



(From Unit 3, Lesson 4.)

8. A polygon has perimeter 12. It is dilated with a scale factor of k and the resulting image has a perimeter of 8. What is the scale factor?

- A. $\frac{1}{2}$
- B. $\frac{2}{3}$
- C. $\frac{3}{4}$
- D. $\frac{4}{3}$

(From Unit 3, Lesson 3.)

9. Select **all** the statements that *must* be true.

- A. Parallelograms have four congruent sides.
- B. Both sets of opposite sides of a parallelogram are parallel and congruent.
- C. A trapezoid is a parallelogram.
- D. Diagonals of a parallelogram bisect each other.
- E. Diagonals of a parallelogram are congruent.

(From Unit 2, Lesson 13.)