

## 7.2 Practice - Similarity and Transformations

Name the coordinates of the vertices after applying the dilation to the polygon. Identify the transformation as either an enlargement or a reduction. Graph the image for question 4.

1.  $D(x, y) \rightarrow \left(\frac{1}{2}x, \frac{1}{2}y\right)$

$A(6, 10), B(-8, 6),$  and  $C(6, -4)$

**Image**

$A'$  \_\_\_\_\_

$B'$  \_\_\_\_\_

$C'$  \_\_\_\_\_

2.  $D(x, y) \rightarrow (3x, 3y)$

$P(1, -1), Q(2, 1), R(-2, 1)$

**Image**

$P'$  \_\_\_\_\_

$Q'$  \_\_\_\_\_

$R'$  \_\_\_\_\_

3.  $D(x, y) \rightarrow (1.5x, 1.5y)$

$G(1, -2), H(1, -4), J(5, -2)$

**Image**

$G'$  \_\_\_\_\_

$H'$  \_\_\_\_\_

$J'$  \_\_\_\_\_

4.  $D(x, y) \rightarrow \left(\frac{1}{3}x, \frac{1}{3}y\right)$

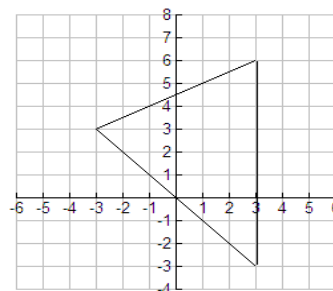
$L(-3, 3), M(3, 6), N(3, -3)$

**Image**

$P'$  \_\_\_\_\_

$Q'$  \_\_\_\_\_

$R'$  \_\_\_\_\_



Determine whether the polygons with the given vertices are similar. If similar give the scale factor to describe the transformation.

5.  $A(-6, 3), B(-3, 9), C(3, 6)$   
 $G(-2, 1), H(-1, 3), J(1, 2)$

6.  $P(2, 2), Q(2, 4), R(4, 6), S(6, 6)$   
 $T(1, 1), U(1, 2), V(2, 3), W(3, 3)$