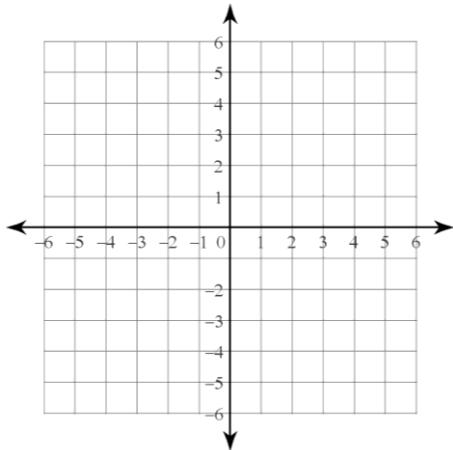


Graph and label each figure and its image under the given reflection. Write the rule using formal notation.

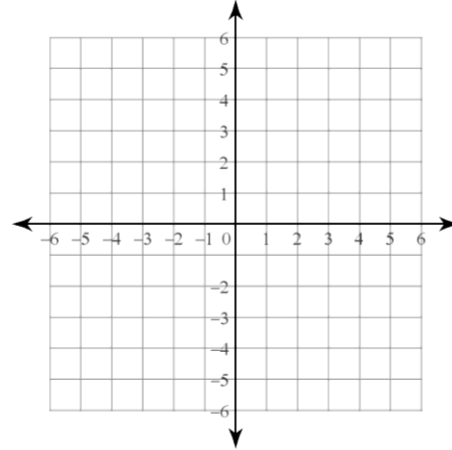
1) Dilate  $\triangle QRS$  if  $Q(-1, 0)$ ,  $R(-1, 2)$ ,  $S(-2, 1)$  by a magnitude of 2 from the origin.



$Q'$  \_\_\_\_\_  
 $R'$  \_\_\_\_\_  
 $S'$  \_\_\_\_\_

Rule: \_\_\_\_\_

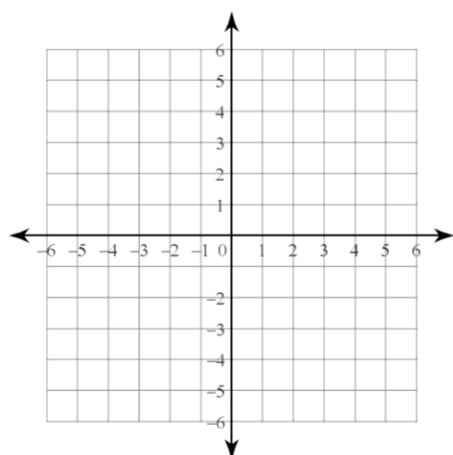
2) Dilate  $\triangle TRK$  if  $T(-1, -2)$ ,  $R(1, 0)$ ,  $K(0, 1)$  by a magnitude of 3 from the origin.



$T'$  \_\_\_\_\_  
 $R'$  \_\_\_\_\_  
 $K'$  \_\_\_\_\_

Rule: \_\_\_\_\_

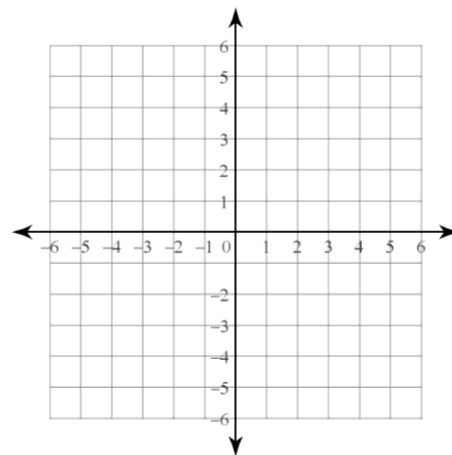
3) Dilate  $\triangle XYZ$  if  $X(-4, 0)$ ,  $Y(-4, 3)$ ,  $Z(-2, -2)$  by a magnitude of  $\frac{1}{2}$  from the origin.



$X'$  \_\_\_\_\_  
 $Y'$  \_\_\_\_\_  
 $Z'$  \_\_\_\_\_

Rule: \_\_\_\_\_

4) Dilate  $\triangle IBM$  if  $I(2, -4)$ ,  $B(1, 2)$ ,  $M(4, 1)$  by a magnitude of  $\frac{3}{2}$  from the origin.

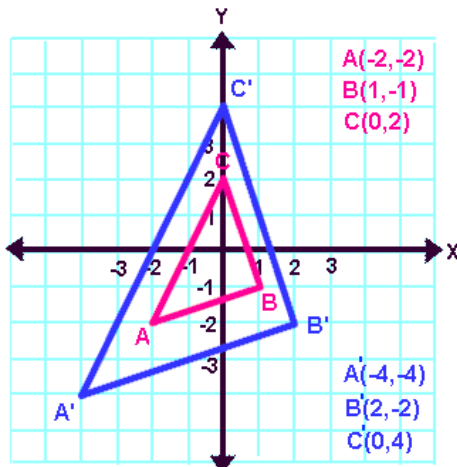


$I'$  \_\_\_\_\_  
 $B'$  \_\_\_\_\_  
 $M'$  \_\_\_\_\_

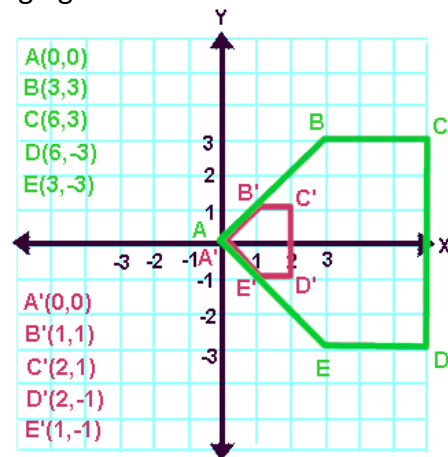
Rule: \_\_\_\_\_

Determine the scale factor that was used to dilate the following figures.

5)



Scale Factor: \_\_\_\_\_

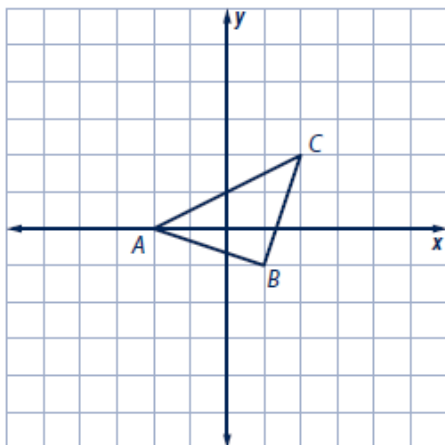


Scale Factor: \_\_\_\_\_

# Transformations

## Applications Task 8

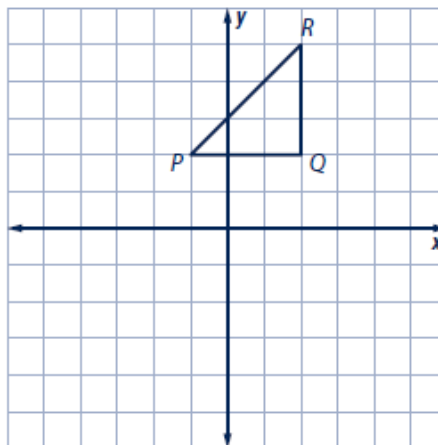
8. a.  $(x, y) \rightarrow (3x, 3y)$



Type of Transformation:

 \_\_\_\_\_  
 \_\_\_\_\_

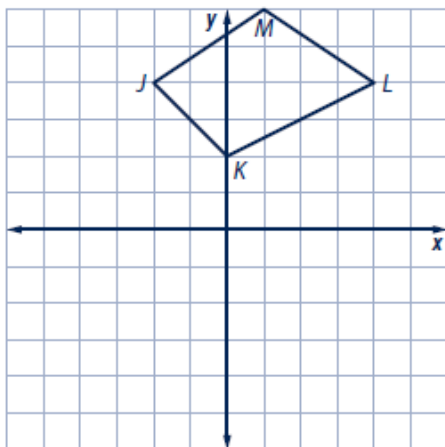
b.  $(x, y) \rightarrow (-x + 8, y)$



Type of Transformation:

 \_\_\_\_\_  
 \_\_\_\_\_

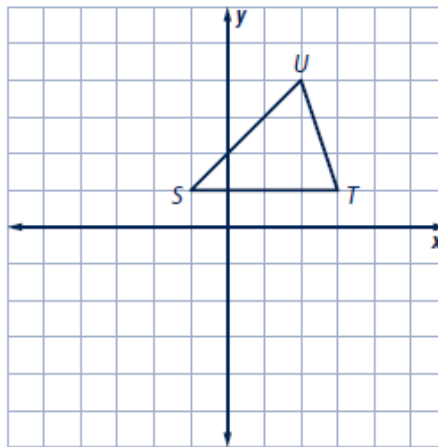
c.  $(x, y) \rightarrow (\frac{1}{2}x, \frac{1}{2}y)$



Type of Transformation:

 \_\_\_\_\_  
 \_\_\_\_\_

d.  $(x, y) \rightarrow (x, -y - 4)$

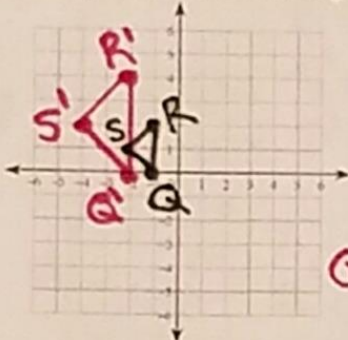


Type of Transformation:

 \_\_\_\_\_  
 \_\_\_\_\_

Graph and label each figure and its image under the given reflection. Write the rule using formal notation.

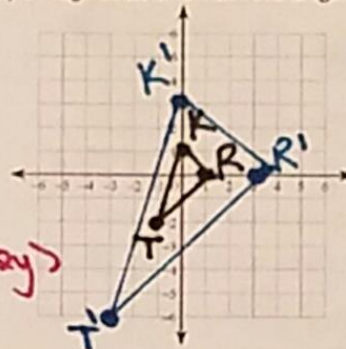
1) Dilate  $\triangle QRS$  if  $Q(-1, 0)$ ,  $R(-1, 2)$ ,  $S(-2, 1)$  by a magnitude of 2 from the origin.



$Q(2, 0)$   
 $R'(-2, 4)$   
 $S'(-4, 2)$

Rule: \_\_\_\_\_  
 $(x, y) \rightarrow (2x, 2y)$

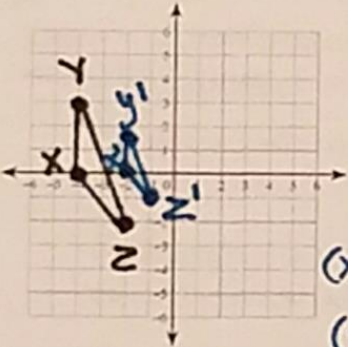
2) Dilate  $\triangle TRK$  if  $T(-1, -2)$ ,  $R(1, 0)$ ,  $K(0, 1)$  by a magnitude of 3 from the origin.



$T'(-3, -6)$   
 $R'(3, 0)$   
 $K'(0, 3)$

Rule: \_\_\_\_\_  
 $(x, y) \rightarrow (3x, 3y)$

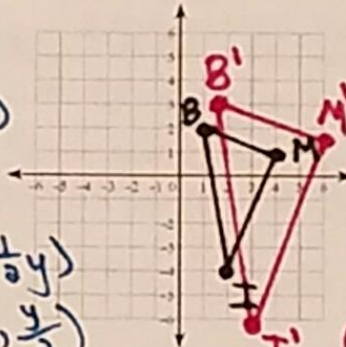
3) Dilate  $\triangle XYZ$  if  $X(-4, 0)$ ,  $Y(-4, 3)$ ,  $Z(-2, -2)$  by a magnitude of  $\frac{1}{2}$  from the origin.



$X'(-2, 0)$   
 $Y'(-2, 3/2)$   
 $Z'(-1, -1)$

Rule: \_\_\_\_\_  
 $(x, y) \rightarrow (\frac{1}{2}x, \frac{1}{2}y)$   
 OR  
 $(x, y) \rightarrow (\frac{x}{2}, \frac{y}{2})$

4) Dilate  $\triangle IBM$  if  $I(2, -4)$ ,  $B(1, 2)$ ,  $M(4, 1)$  by a magnitude of  $\frac{3}{2}$  from the origin.

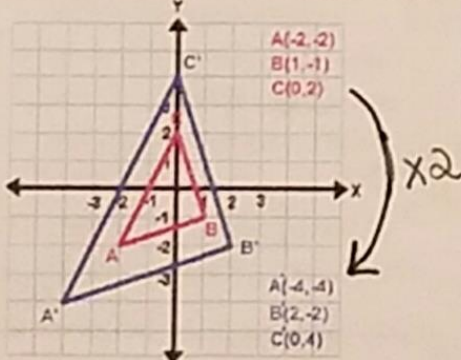


$I'(3, -6)$   
 $B'(3/2, 3)$   
 $M'(6, 3/2)$

Rule: \_\_\_\_\_  
 $(x, y) \rightarrow (\frac{3}{2}x, \frac{3}{2}y)$   
 OR  
 $(x, y) \rightarrow (\frac{3x}{2}, \frac{3y}{2})$

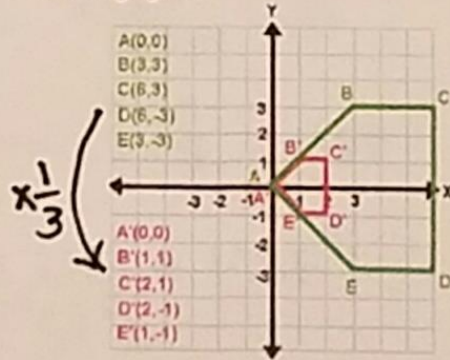
Determine the scale factor that was used to dilate the following figures.

5)



Scale Factor: 2

Alg. Rule:  $(x, y) \rightarrow (2x, 2y)$   
 Enlargement by 2.



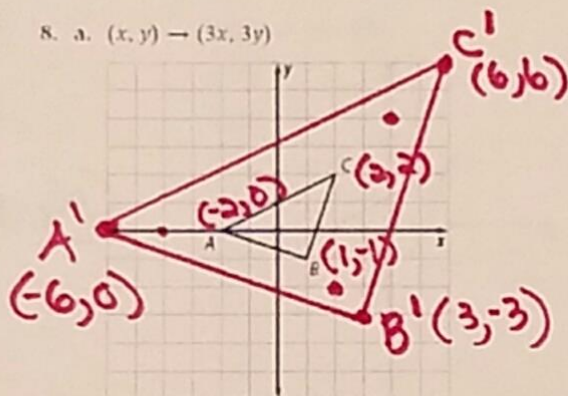
Scale Factor: 1/3

Alg. Rule:  $(x, y) \rightarrow (\frac{1}{3}x, \frac{1}{3}y)$   
 Description: Reduction by 1/3.

## Transformations

## Applications Task 8

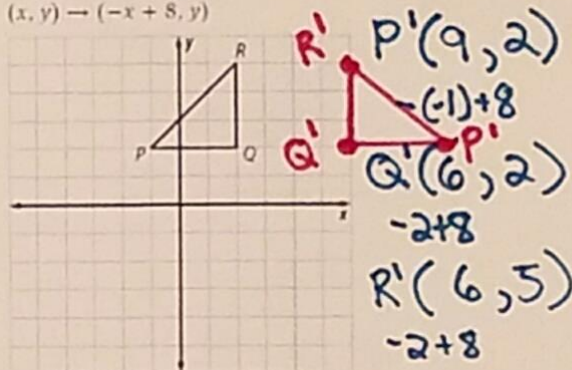
8. a.  $(x, y) \rightarrow (3x, 3y)$



Type of Transformation:

Enlargement  
by 3.

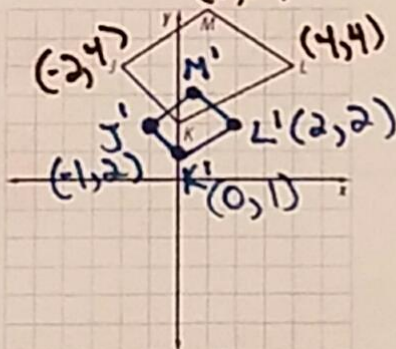
b.  $(x, y) \rightarrow (-x + 8, y)$



Type of Transformation:

Glide reflection: Reflection  
over y-axis  
+ translation right 8 units.

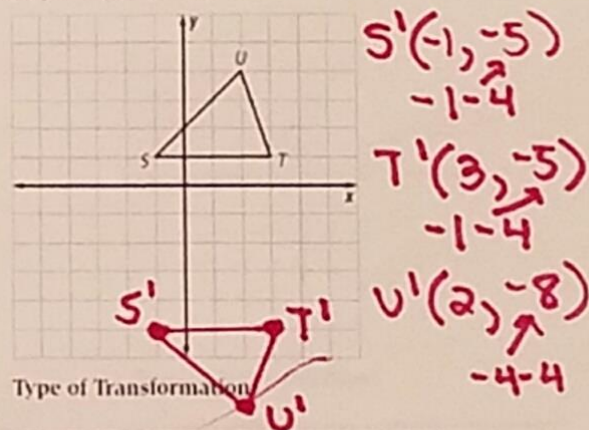
c.  $(x, y) \rightarrow (\frac{1}{2}x, \frac{1}{2}y)$



Type of Transformation:

Reduction  
by 1/2.

d.  $(x, y) \rightarrow (x, -y - 4)$



Type of Transformation:

Glide reflection:  
reflection over x-axis  
and down 4 units,  
translated