

DILATIONS

Guided Notes

Name: _____

Date: _____

BASIC INFORMATION:

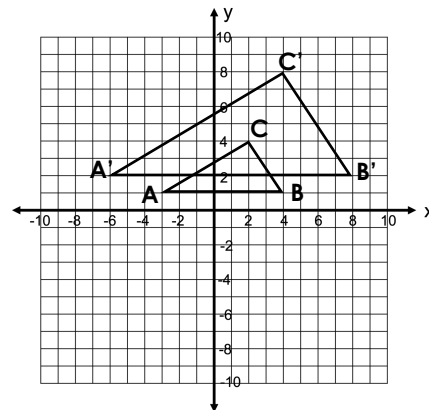
A **dilation** is a transformation that produces an image that is the same _____ as the original but is a different _____.

Unlike other transformations a dilation is not a _____ because size and shape are not preserved.

A **center of dilation** is the point about which a figure is dilated. (We will only use the origin as our center of dilation.)

A figure that has been dilated has just been multiplied by a **scale factor (k)**.

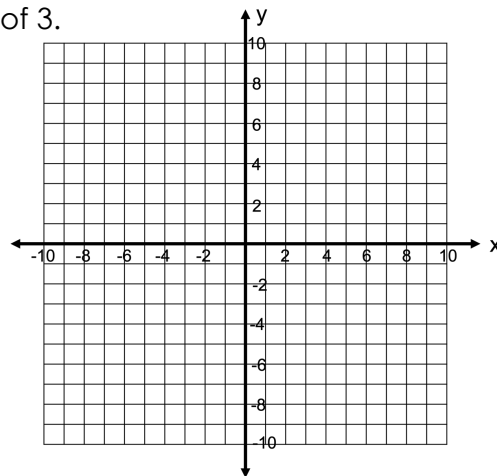
The dilation is a reduction if k _____ and an enlargement if k _____.



PERFORMING DILATIONS:

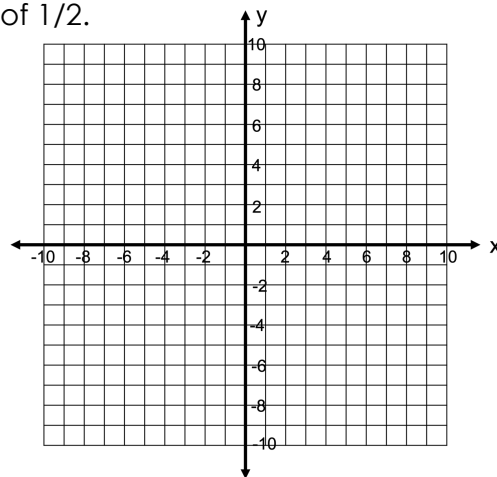
1. Graph the figure and its image after a dilation with a scale factor of 3.

$$\left. \begin{array}{l} J(-2, 3) \\ K(0, 1) \\ L(3, 3) \end{array} \right\} \times \quad \longrightarrow \quad \begin{array}{l} J' \quad ______ \\ K' \quad ______ \\ L' \quad ______ \end{array}$$



2. Graph the figure and its image after a dilation with a scale factor of $1/2$.

$$\begin{array}{l} A(-8, 6) \\ B(4, 6) \\ C(4, -4) \\ D(-8, -4) \end{array} \quad \longrightarrow \quad \begin{array}{l} A' \quad ______ \\ B' \quad ______ \\ C' \quad ______ \\ D' \quad ______ \end{array}$$



DILATIONS

Guided Notes

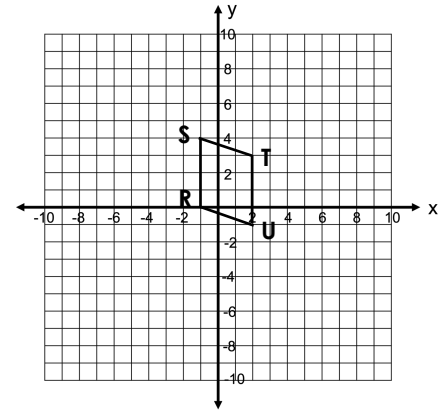
Name: _____

Date: _____

Check:

Determine the coordinates of the image after it has been dilated by $k = 2$.

R' _____ S' _____ T' _____ U' _____



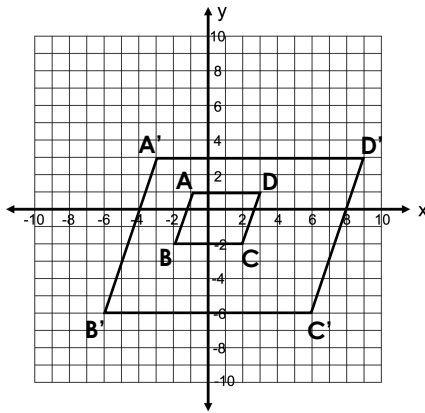
FINDING SCALE FACTOR:

On each graph the figures have been dilated. Find the scale factor of each dilation and determine whether it is a reduction or enlargement.

1. Scale Factor: _____

Circle One:

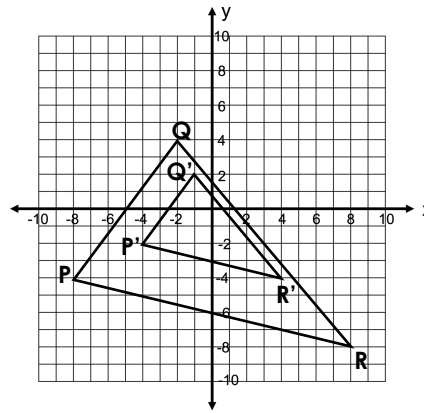
Reduction or Enlargement



2. Scale Factor: _____

Circle One:

Reduction or Enlargement



Check:

Determine the scale factor for the given dilation.

- a. 2
- b. $1/2$
- c. 4
- d. $1/4$

