

A **dilation** is a transformation that will either **enlarge** the figure or **reduce** it. The image and preimage are similar but not congruent.

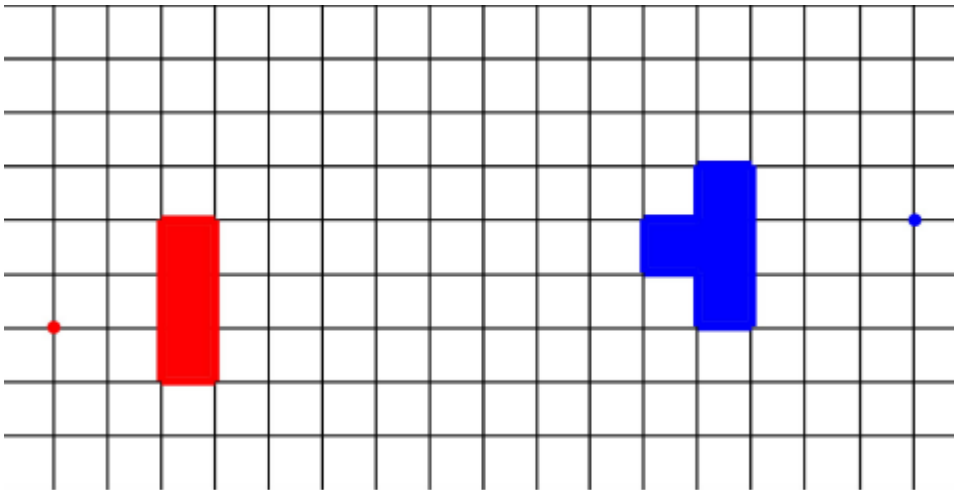


When a scale factor is **greater than one** the image of the figure will be **bigger**.

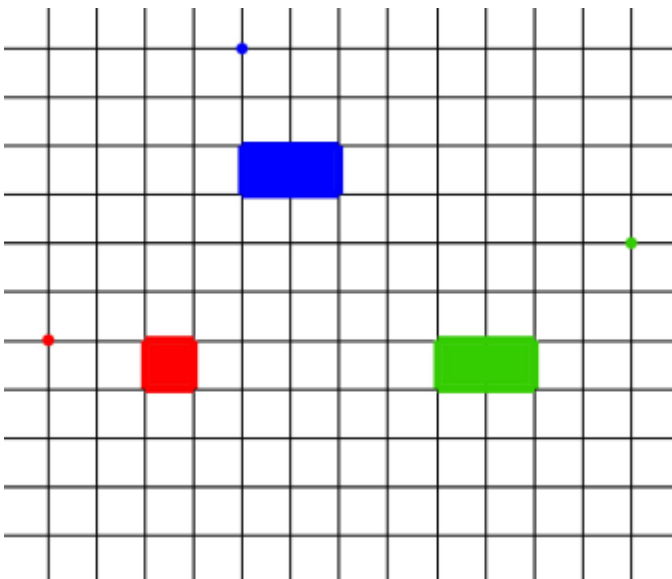
When the scale factor is **between zero and one** the image of the figure will be **smaller**.

Is a dilation an isometry?

Try This #1

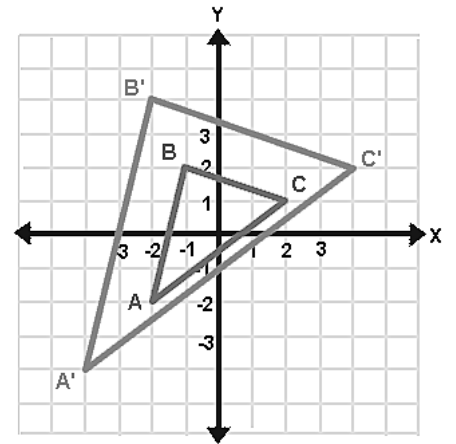


Try This #2



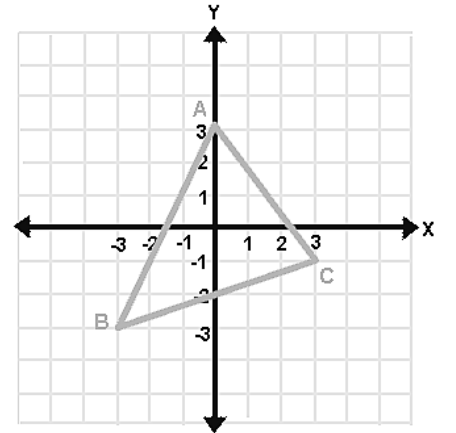
Example 1: What is the scale factor for the dilation

from $\triangle ABC$ to $\triangle A'B'C'$

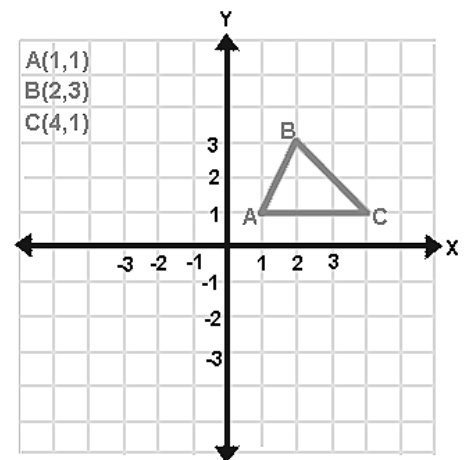


Example 2: What are the coordinates of the image of point B

under a dilation with center at the origin of scale factor $1/3$?



Example 3: Under a dilation of scale factor 3 with the center at the origin, what will be the coordinates of the image of point B ?



Homework: Complete the Day 12 Dilations Worksheet