Math 1

Transformations

SWBAT determine similarity of images created by transformations.

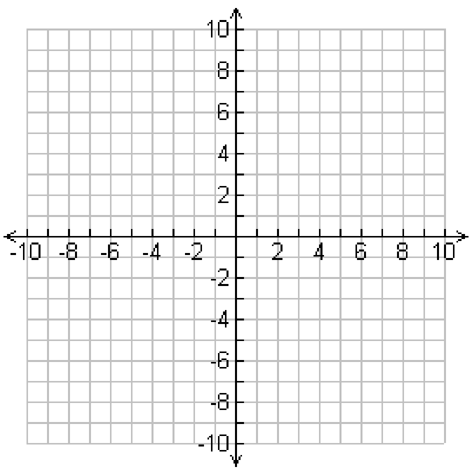
Transformations move a figure without ____
Translation:
Reflection:
Rotation:
Dilation:

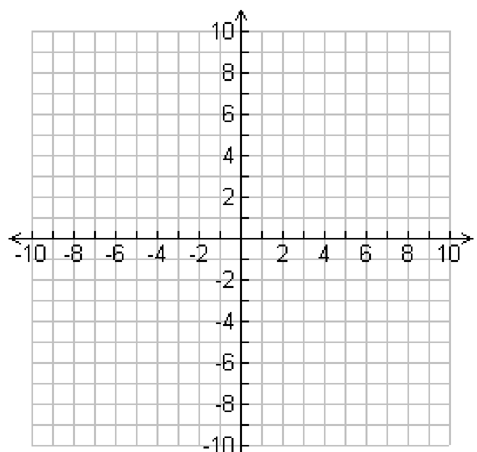
Vocabulary
Transform: ____
Rigid Transformation: ____
Congruent: ____

Translations: To translate a figure on a coordinate plane, you ___________ the figure in the direction given in the problem.

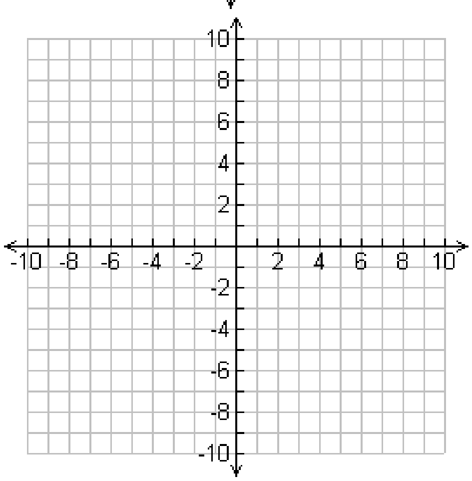
1. Choose one point on the original figure and ____
2. This new point will be labeled with ( ) after each new letter. This symbol is called _________, which let's you know this figure is the _______________.
3. Slide the other original points in the exact same directions as the first point making sure you label them with ________
4. Draw the lines to create the new image, which should be ____________to the original (___________), just in a new place on the coordinate grid.

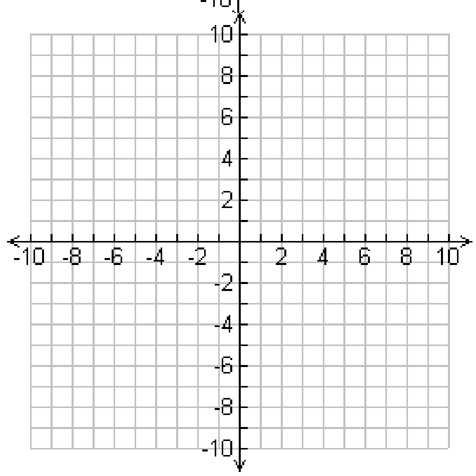
Describe this translation.



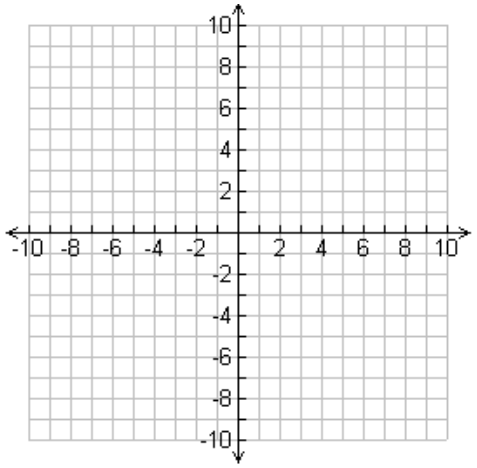


A(-2,4) A'(__,__)
B(1,3) B'(__,__)
C(0,5) C'(__,__)



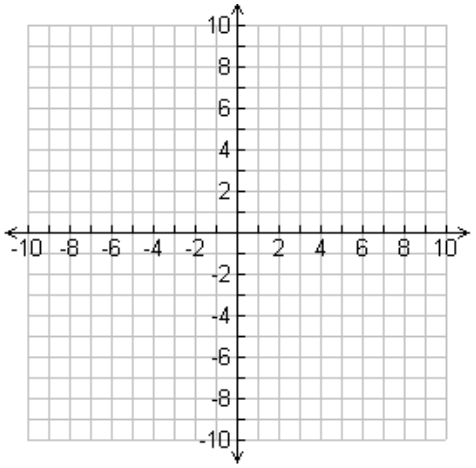


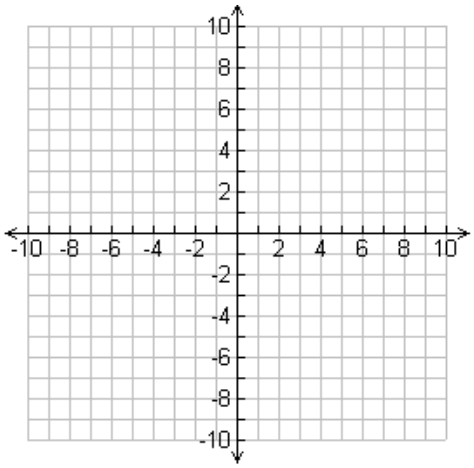
Reflection: A reflection is a _____where the original figure is _____over the x-axis or y-axis to create a new image.
Count the _____ of spots from the axis. _____ that number to the other side of the _____



If you reflect the original figure across the y-axis, change the sign of each x-value.

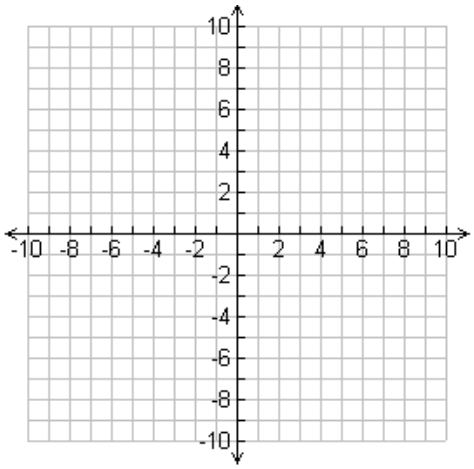
If you reflect the original figure across the x-axis, change the sign of each y-value.

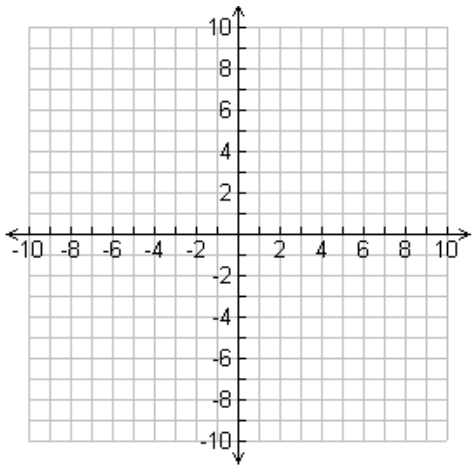


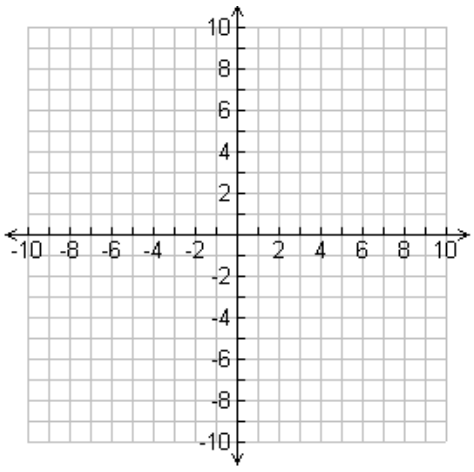


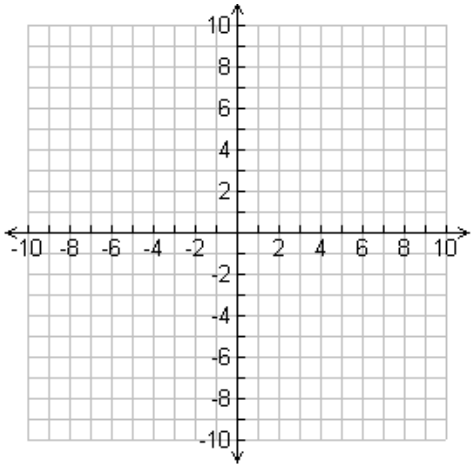
Rotation: A rotation is a transformation in which a figure is _____ a fixed point, call the _____. Rotating a figure creates a _____ figure called an _____. The original figure and the image have the same shape and the same size and are an _____ from the center of the rotation.

Rules for Rotation



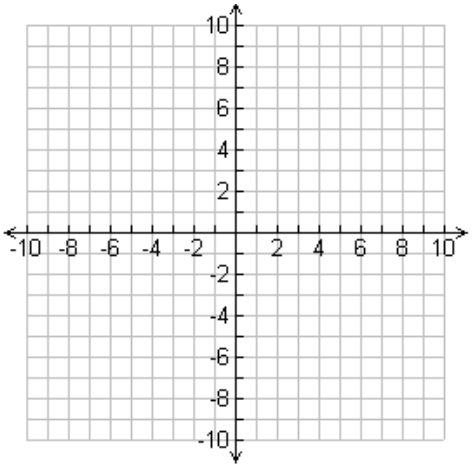


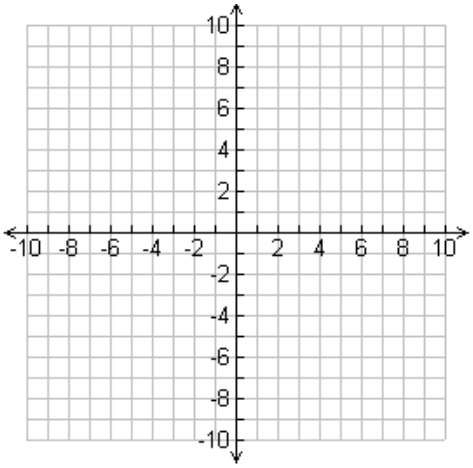




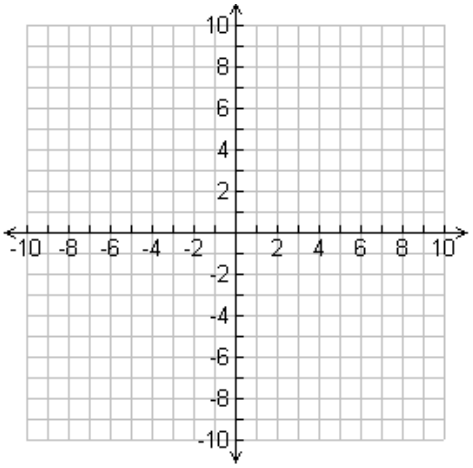
Dilation: Enlarges or Shrinks a shape. The ratio by which the image stretches or shrinks is known as the _____

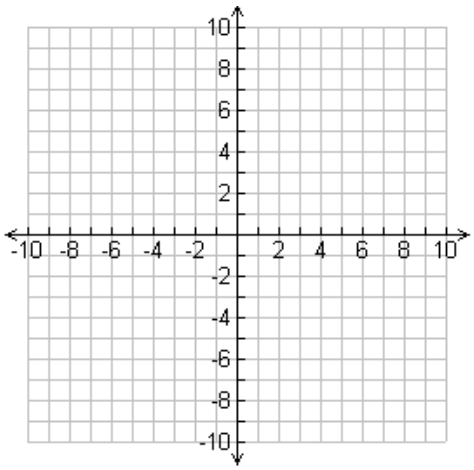
If the scale facto is _____ then the image is enlarged. If the scale factor is _____then the image will shrink.
Multiply the dimension of the original image by the scale factor to get the _____

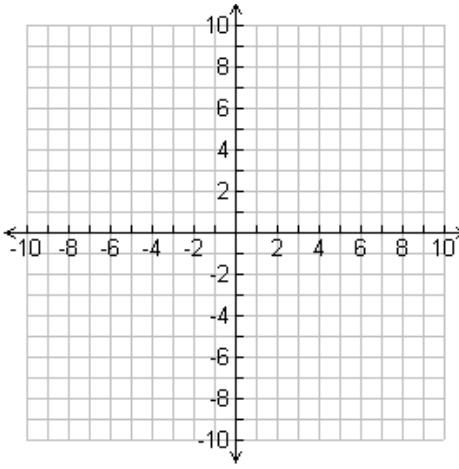


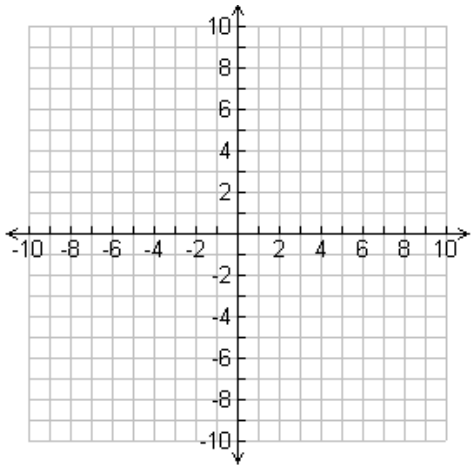


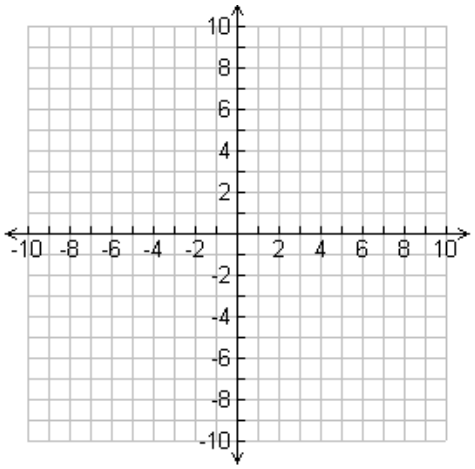
Your Turn!

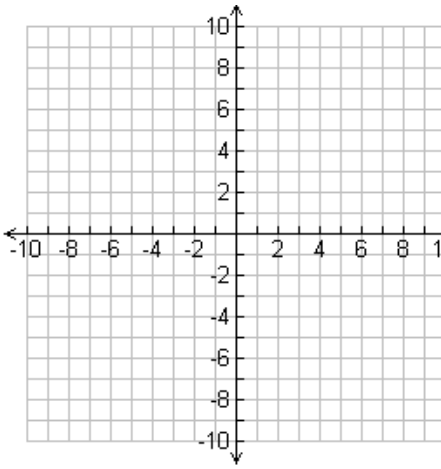


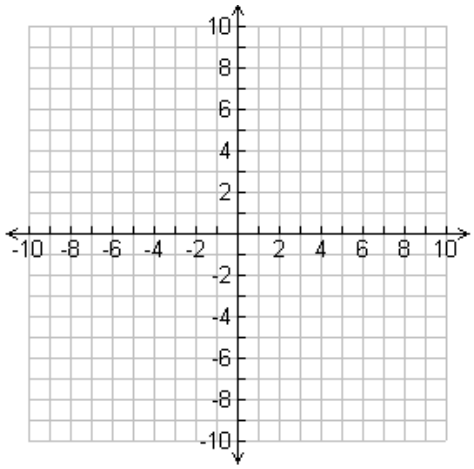


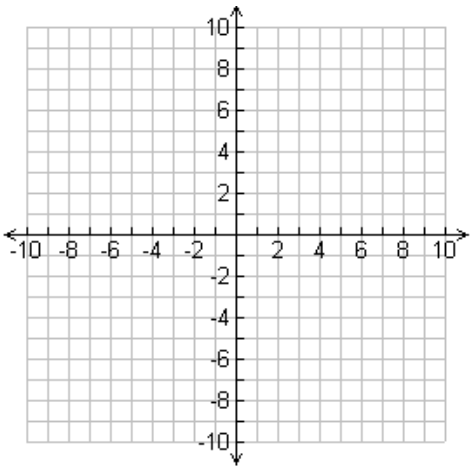


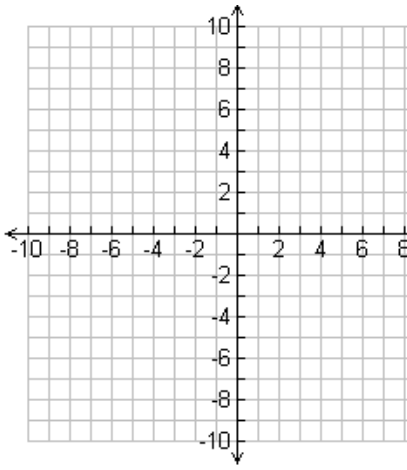

10
8
6
4
2
-10 -8 -6 -4 -2 2 4 6 8 10
-2
-4
-6
-8
-10


10
8
6
4
2
-10 -8 -6 -4 -2 2 4 6 8 10
-2
-4
-6
-8
-10


10
8
6
4
2
-10 -8 -6 -4 -2 2 4 6 8
-2
-4
-6
-8
-10


10
8
6
4
2
-10 -8 -6 -4 -2 2 4 6 8 10
-2
-4
-6
-8
-10


10
8
6
4
2
-10 -8 -6 -4 -2 2 4 6 8 10
-2
-4
-6
-8
-10


10
8
6
4
2
-10 -8 -6 -4 -2 2 4 6
-2
-4
-6
-8
-10