

Advanced Geometry
Dilations

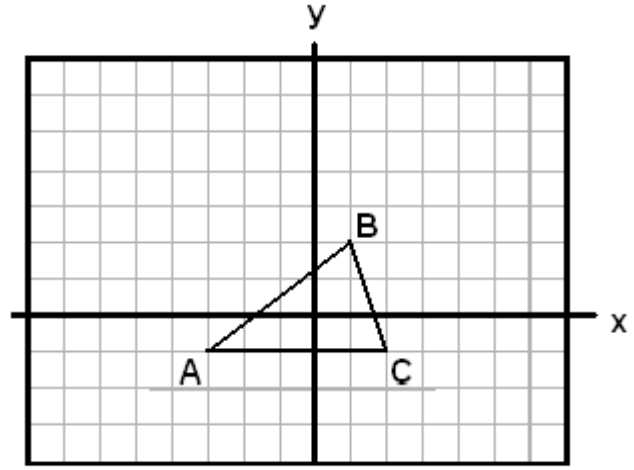
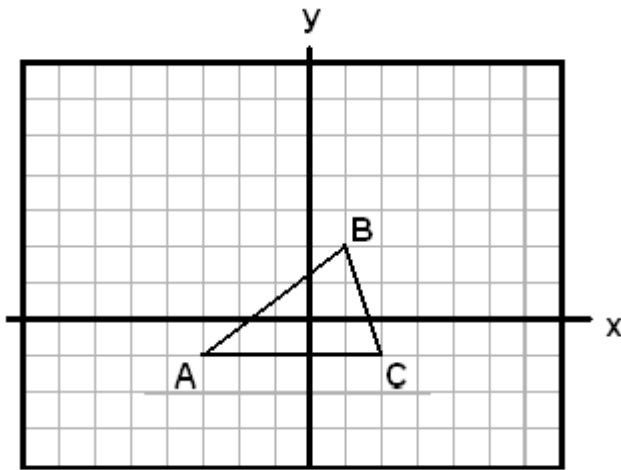
Name: _____

Transformation that produces an image that is the "same shape" but a different size than the original.

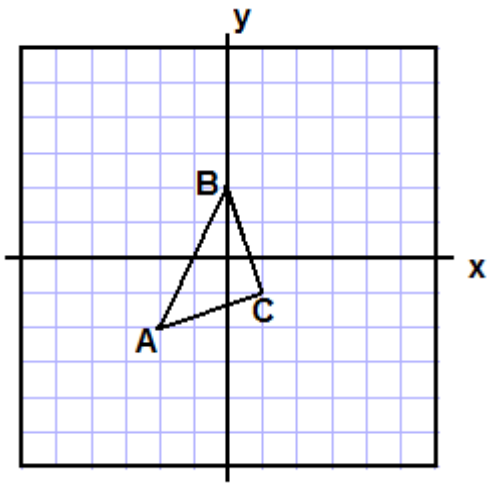
Scale factor > 1 : Enlargement

0 < Scale factor < 1 : Reduction

** We will always use the origin as the center of dilation if we are in a coordinate plane.



[EX 1] Given the figure below with A(-2,-2), B(1,-1), and C(0,2), draw the resulting image A'B'C' centered at the origin with scale factor 2. Then use the distance formula and your calculator to compute the following:



$$\frac{A'B'}{AB} =$$

$$\frac{A'C'}{AC} =$$

$$\frac{B'C'}{BC} =$$

Use your protractor to find these...

$$m \angle A =$$

$$m \angle B =$$

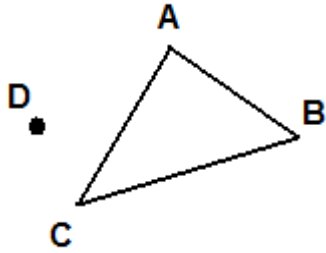
$$m \angle C =$$

$$m \angle A' =$$

$$m \angle B' =$$

$$m \angle C' =$$

[EX 2] Scale the figure below using a scale factor of 3 with D as the center of dilation.



[EX 3] Given the original figure and its dilation below, find the center of dilation and the corresponding scale factor.

