

Warm up:

Reflect triangle
ABC over the line
 $x = -3$.

$A(2,7)$

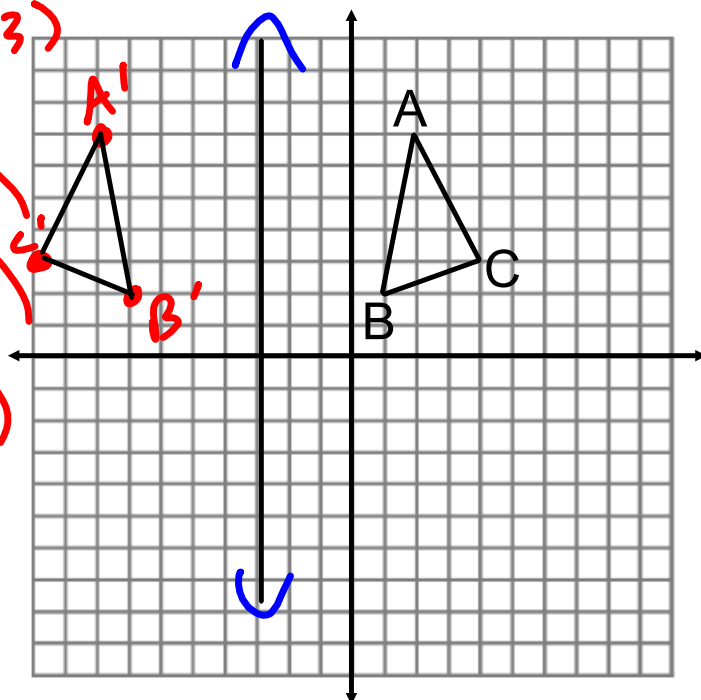
$A'(-8,7)$

$B(1,2)$

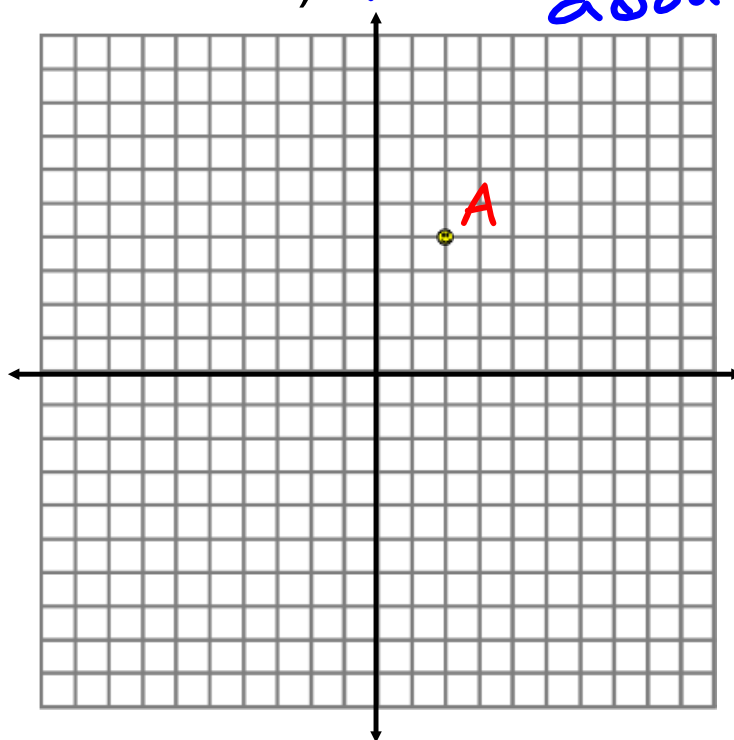
$B'(-7,2)$

$C(4,3)$

$C'(-10,3)$



Rotations are done counter-clockwise (unless otherwise noted) *rotate about the origin*



$A(2,4)$

90°
 $A'(4,2)$

180°
 $A'(-2,-4)$

270°
 $A'(4,-2)$

Step 1 Draw the x axis and y axis on your graph paper. Draw a triangle in the first quadrant that has vertices with integer coordinates and label it *ABC*. Place the tracing paper on graph paper and trace the axes and your triangle.

Step 2 Place the sharpened end of your pencil on the origin and rotate the tracing paper 90° . Write the coordinates of *A'*, *B'*, and *C'* and copy the triangle onto your graph paper. Write " 90° " inside the triangle.

Step 3 Rotate the tracing paper 180° . Write the coordinates of *A'*, *B'*, and *C'* and copy the triangle onto your graph paper. Write " 180° " inside the triangle.

Step 4 Rotate the tracing paper 270° . Write the coordinates of *A'*, *B'*, and *C'* and copy the triangle onto your graph paper. Write " 270° " inside the triangle.