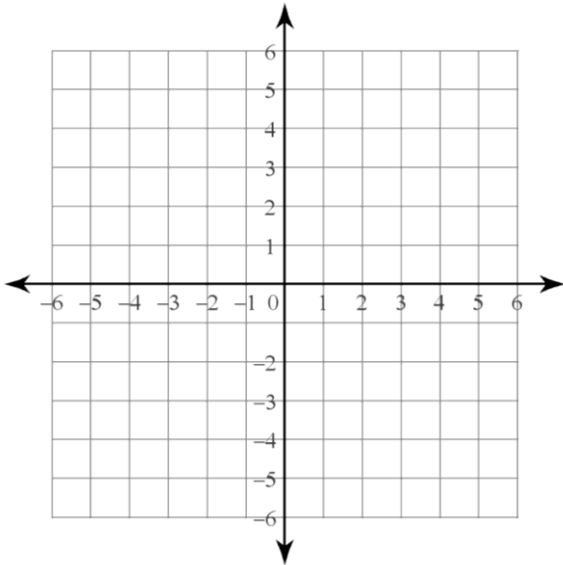Name: _____ Due Date: _____ Period: _____

12.3b Rotations Day 2

Every time you are told to rotate a shape, what two pieces of information do you need to know about the rotation?

- _____
- _____

1) Rotate △BAT where F(-5,3), O(-1,4), and R(-2,2) 180° clockwise about the origin.

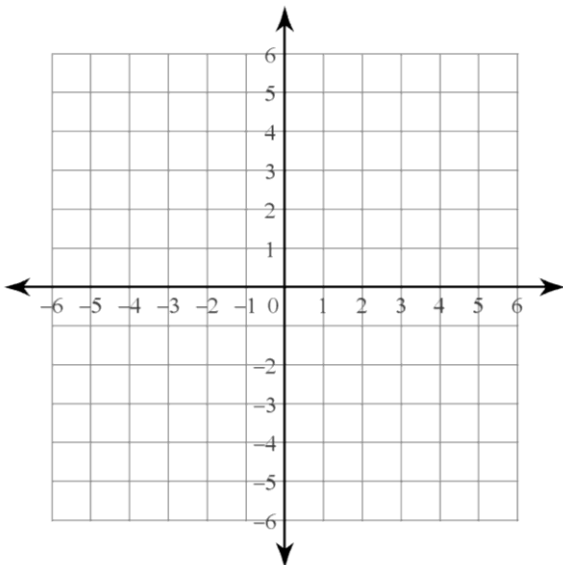B (___,___)   B'(___,___)
A (___,___)   A'(___,___)
T (___,___)   T'(___,___)

Describe how you did the rotation:

Describe what happened to the coordinates of each point:

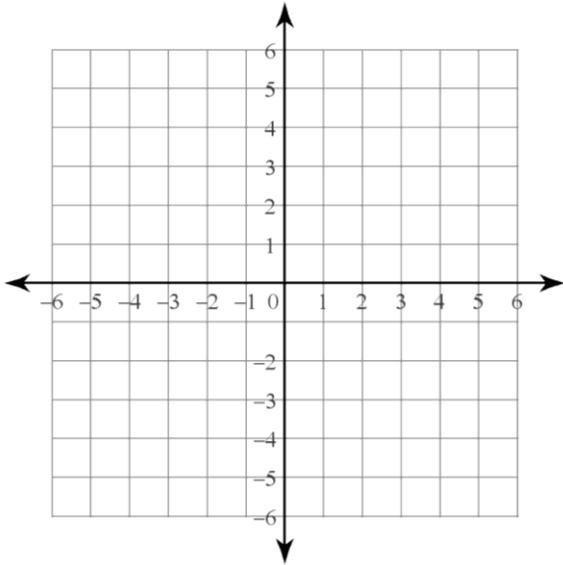2) Rotate △GST G(1,2), S(3,0), AND T(4,4) 180° counterclockwise about the origin.

G (___,___)   G'(___,___)
S (___,___)   S'(___,___)
T (___,___)   T'(___,___)

Describe how you did the rotation:

Describe what happened to the coordinates of each point:

When you rotate a shape 180°, does it matter if you go clockwise or counterclockwise?

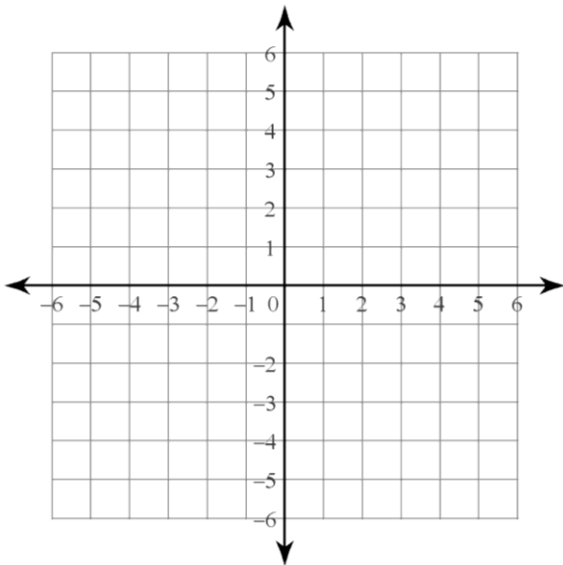3) Rotate △GHL, where G(2,1), H(0,3), and L(5,4), 90° clockwise about the origin.

G(___,___)   G'(___,___)
H(___,___)   H'(___,___)
L(___,___)   L'(___,___)

Describe how you did the rotation:

Describe what happened to the coordinates of each point:

4) Rotate △WCH, where W(-3,-1), C(-4,-3), and H(-1,-3), 90° counterclockwise about the origin.

W(___,___)   W'(___,___)
C(___,___)   C'(___,___)
H(___,___)   H'(___,___)

Describe how you did the rotation:

Describe what happened to the coordinates of each point:

5) Given △ABC has the following points: A(2, 2), B(7, 3), and C(5, 7).
   a) Find the points of the image after the following a 90° rotation counterclockwise:
       Hint the rule is $(x, y) \rightarrow (-y, x)$
           A' _____
           B' _____
           C' _____
   b) Find the points of the image after the following a 180° rotation:
           A' _____
           B' _____
           C' _____
   c) Find the points of the image after the following a 270° rotation counterclockwise:
           A' _____
           B' _____
           C' _____