

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. (a)  $(3, 2)$

(b)  $(2, -3)$

(c)  $(3, -6)$

(d)  $(2, 3)$

2. (a)  $(-7, 4)$

(b)  $(4, 7)$

(c)  $(1, 4)$

(d)  $(-7, -4)$

3. (a) Reflection in the line  $y = x$ .

(b) Reflection in the  $x$ -axis.

(c) Rotation about the origin,  $90^\circ$  counterclockwise.

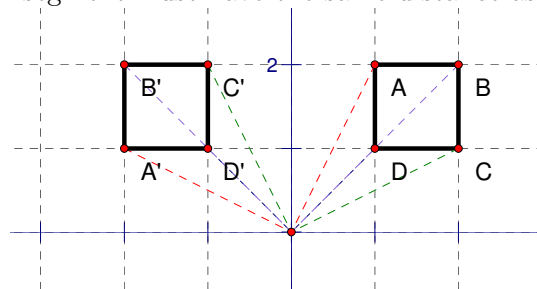
4. (a)  $(2, 3)$

(b)  $(-3, 2)$

(c)  $(3, -2)$

(d)  $(2, 3)$

5. The way to do rotations is to draw a line from each point to the point of rotation, and then to rotate that line the appropriate angle. This is especially easy for this problem since we need to rotate by  $90^\circ$ , which involves simply finding the perpendicular to the line. Notice that the perpendicular segment must have the same distance as the original segment.



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6. If we draw the segments from points to their reflections, the line of reflection is the perpendicular bisector of those segments. This gives us  $m$  to be  $y = -x$ .

