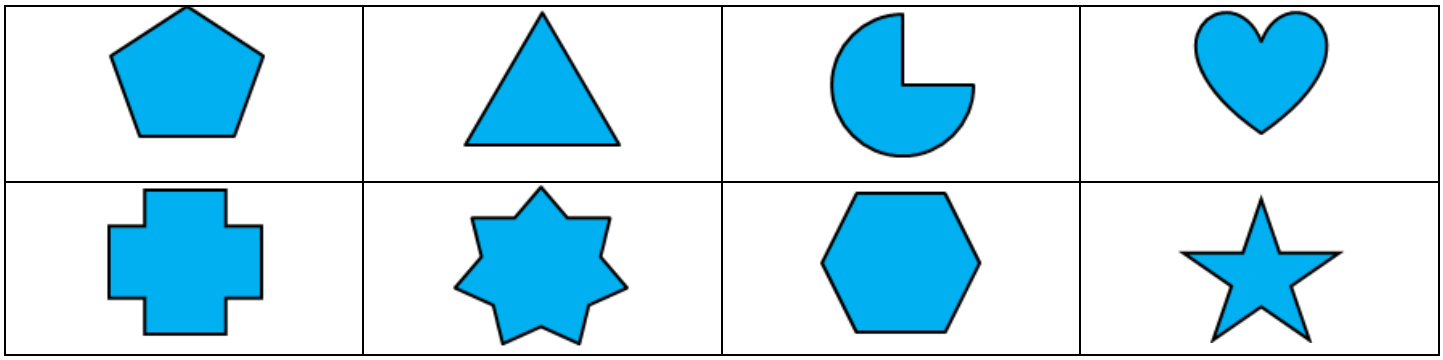
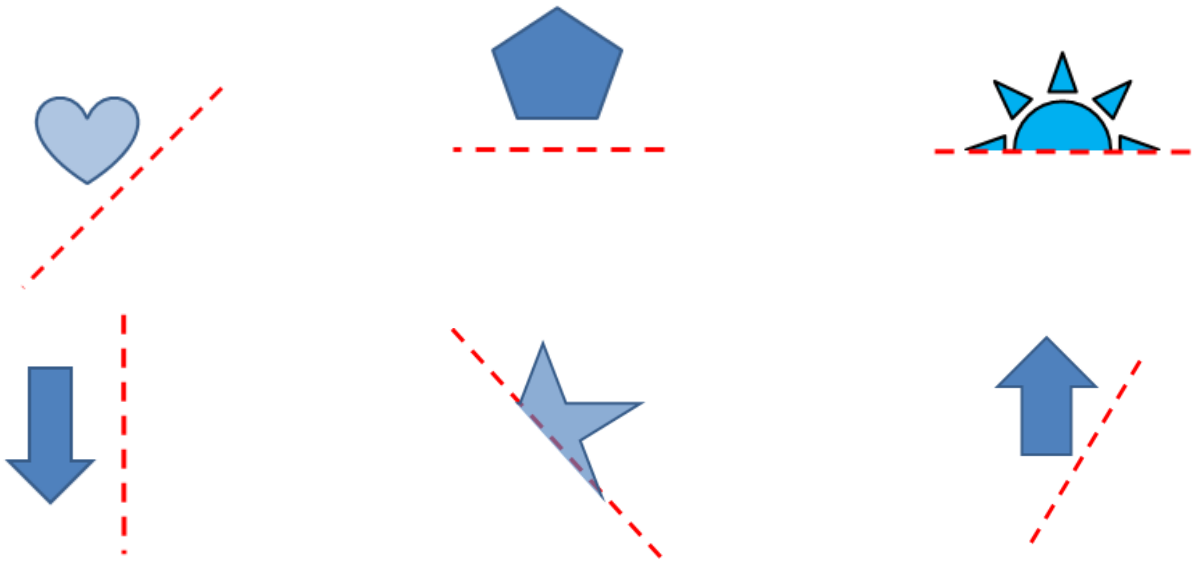
Name:_____ Date:_____

HW Section 7.5 Reflections and Line Symmetry:

1. Given each of the following shapes, draw all the lines of symmetry:

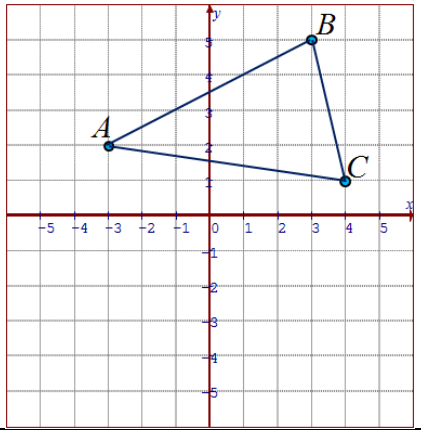


2. Given each object with the line of symmetry, draw the reflection using a mirror:

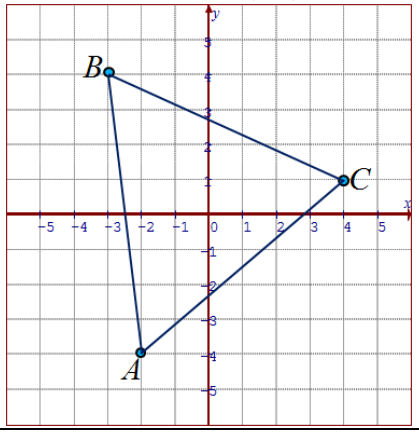


3. Given the following shape, draw the shape after each reflection. Find the coordinates of the vertices:

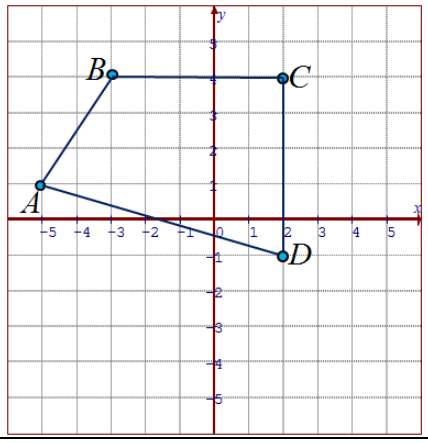
a) Reflect the following shape over the X-axis and then find the coordinates of *A'*, *B'*, and *C'*



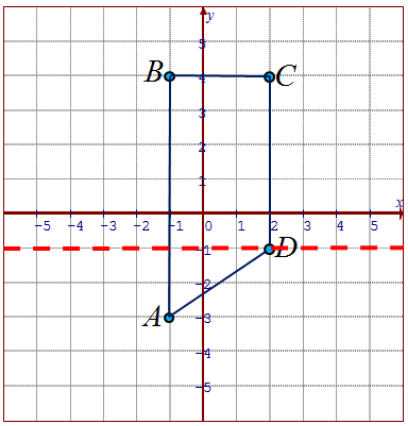
b) Reflect the following over the Y-axis and then find the coordinates of *A'*, *B'*, and *C'*



c) Reflect the following over the line y=x and then find the coordinates of *A', B', C', and D'*



d) Reflect the following over the horizontal dashed line and then find the coordinates of *A', B', C', and D'*



4. If a point is reflected over the Y-axis, which coordinate stays the same and which one changes?

5. If a point is reflected over the X-axis, which coordinate stays the same and which one changes?

6. What happens the coordinates of a point if it is reflected over the line *y=x*?

7. What is the coordinate of A(3,5) after it is reflected over the Y-axis

8. If the point B was reflected over the vertical line x=3, the coordinates of the new point would be (3,4). What was the original coordinate of point "B"?

9. Which of the following shapes will have the most lines of symmetry? Rhombus, Trapezoid, Oval, or Octagon.

10. Which letters in the alphabet have only one line symmetry? Which letters have more than one?

11. If the coordinates of point P is *(a,b)*, then what is the coordinate of P' if it is reflected over the line *y=x*.