Transformations

Name_____

1. Given coordinates P(9,2):

a) what would the coordinates be if point P was reflected across the y-axis?

b) In which Quadrant did point P reside and in which did it reflect to?

2. Given coordinates L(x,y):

a) what would the coordinates be if point L was reflected across the x-axis from Quadrant I to IV?

b) what would the coordinates be if point L was reflected across the y-axis from Quadrant I to II?

3. How would the coordinates change if dilated by ¾ for J(4/3, 4)?

4. How would the coordinates change if dilated by ½ for J(2,10)?

5. How would the coordinates change if translated 7 units left and 6 units up for Q(3,8)?

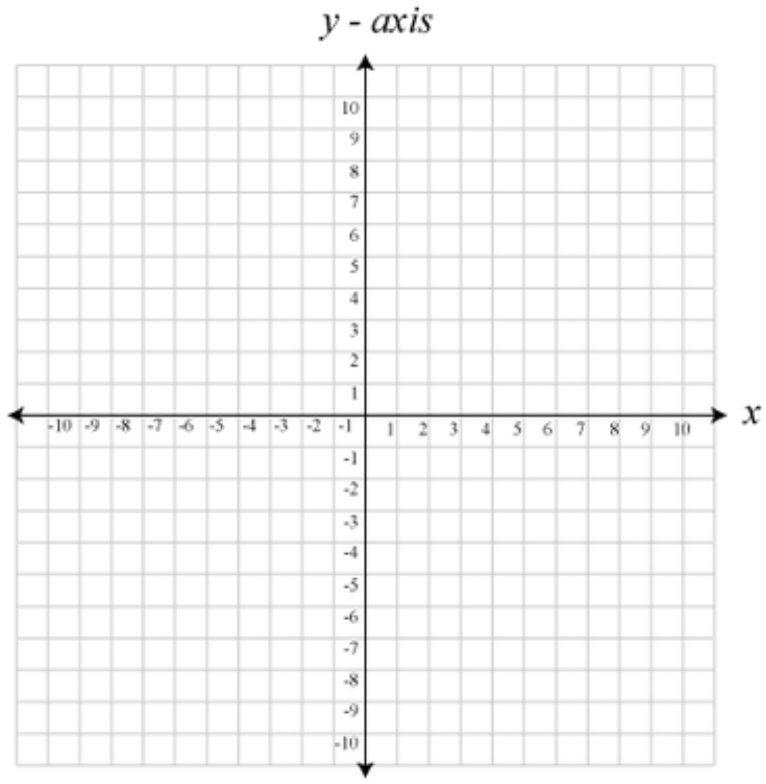
6. How would the coordinates change if translated 4 units left and 2 units down for R(x,y)?

7. How would the coordinates change if translated 3 units right and 2 units down for M(x-2, y+4)?

8. What transformations occurred?
(3x, 2y) → (9x-3, 6y+4)

9. Given point A(3,2), what will the coordinates be if it is reflected across the y-axis? _____
What will the coordinates be if it is then translated 1 units left and 2 units down? _____
How will the coordinates be changed if the point is dilated by 3? _____

Graph and label the final image.



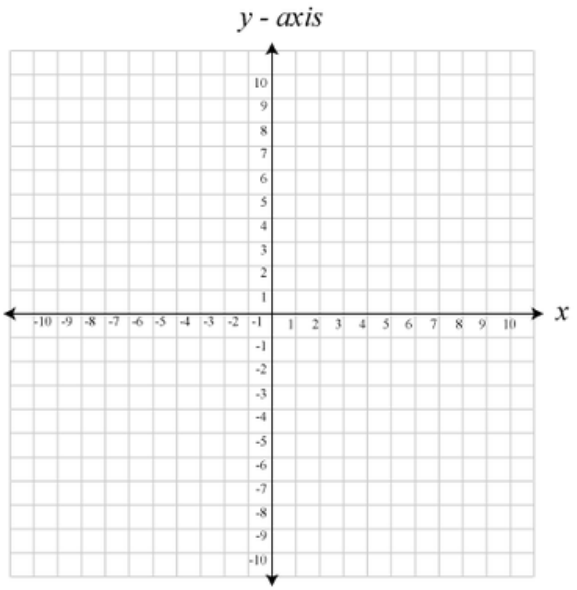
10. Add points B'''(-4, -3) and C'''(-9,1) to your new coordinates and graph for #9.

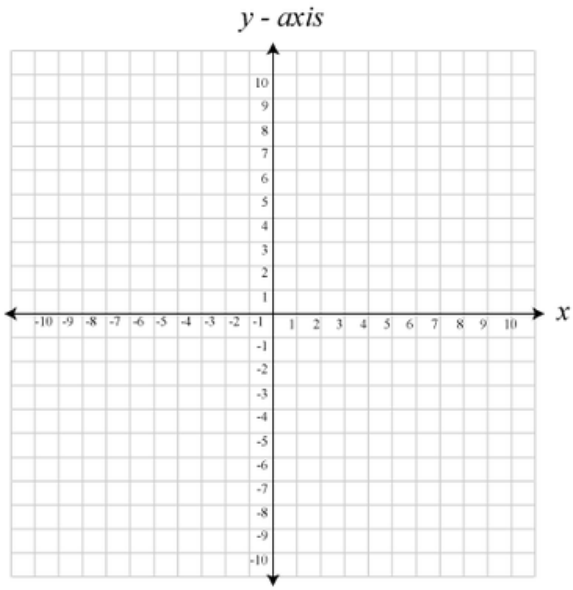
a) What are the new coordinates for a triangle reflected over the x axis?

11. How is reflecting over the x axis and x=2 line different?

12. If the measures of each angle for the figure in #10 (original triangle) are 2x, 5x+2 and 38 degrees what is the value of x and the measures of the angles.

13. (Below)Reflect the following figure over the line y = x : T(8,9), S(-2,2), U(-3, 1).





EXTRA CREDIT:

14. (Above) Reflect the following figure over the line y = - x : T(1,9), S(-2,1), U(-1, -2).

15. Take the following coordinate and reflect it 1) over y=x, 2) over the y axis, 3) y=-x, and over the x axis. V(2,16).