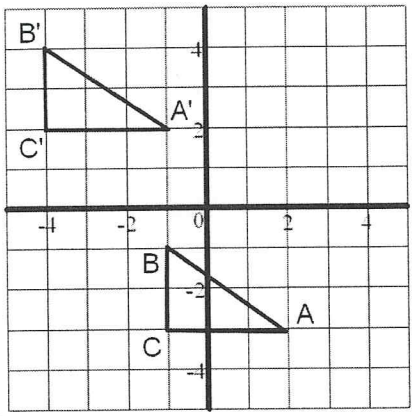
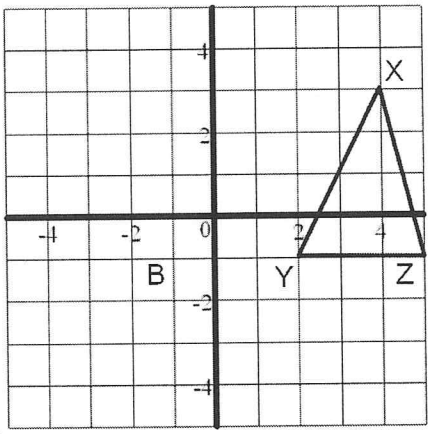
Geometry Review Quiz #1 Sec 9-1 to 9-3 Fall 2013

1. Describe what this translation represents in words: $(x,y) \rightarrow (x-2, y+3)$

2. Write a rule for the translation shown below.



3. Draw and label the image of $\triangle XYZ$ after the following translation: $(x,y) \rightarrow (x-3, y-2)$

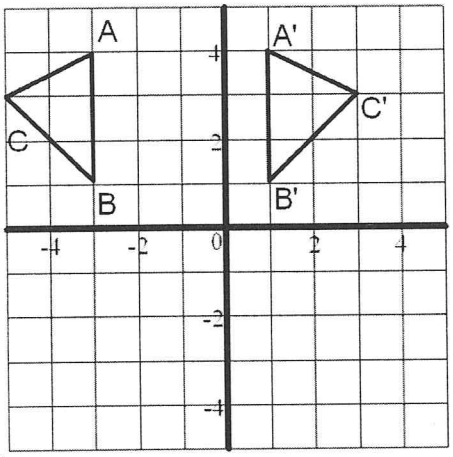


4. Find the coordinates of $\triangle EFG$ after the following translation:
$E(1,2)$ $F(5,3)$ $G(2,4)$ $(x,y) \rightarrow (x+12, y-27)$

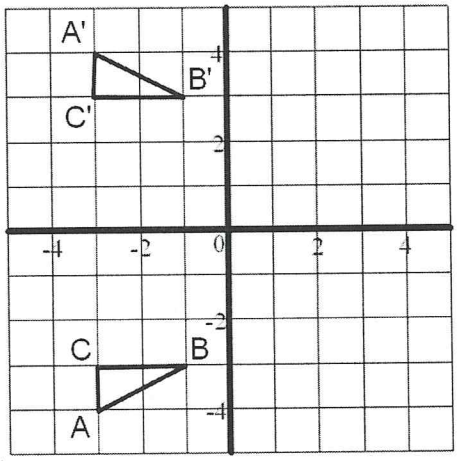
5. Given the coordinates of P and P' below to write a rule for the translation.
$P(-4,9)$ $P'(2,5)$

6. Draw the line of reflection and write its equation for the reflections shown below.

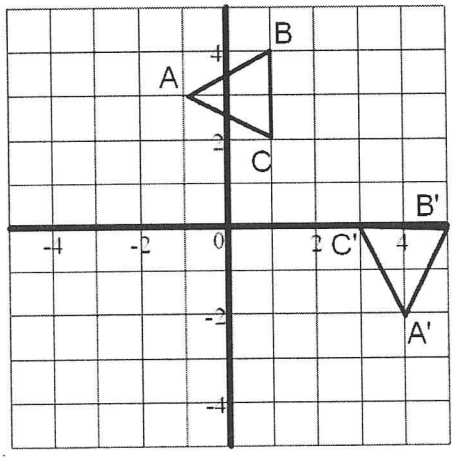
a)



b)



c)



7. For each of the below, draw the image of $\triangle PQR$ $P(-2,1)$ $Q(-1,4)$ $R(-3,2)$ after each reflection.

a) A reflection of $\triangle PQR$ over the x-axis.
b) A reflection of $\triangle PQR$ over the y-axis.
c) A reflection of $\triangle PQR$ ovre the line $x = 2$
d) A reflection of $\triangle PQR$ over the line $y = x + 1$

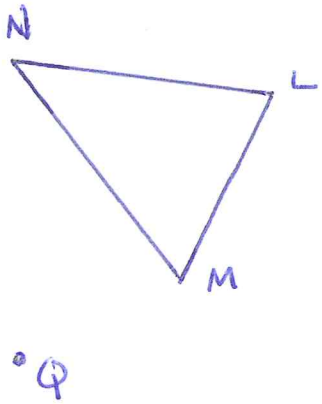
8. For each of the below, find the coordinates for the image of $A(5,6)$ after a reflection over the given line.

a) Over the line $y = -1$
b) Over the x-axis
c) Over the line $x = -2$
d) Over the y-axis
e) Over then line $x = 1$ then over the line $y = 1$

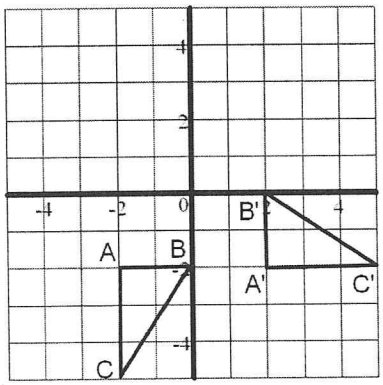
9. Using graph paper, draw the image of $\triangle ABC$ after each rotation.
$A(3,0)$ $B(3,4)$ $C(5,2)$

a) 90° CW b) 180° CW c) 90° CCW

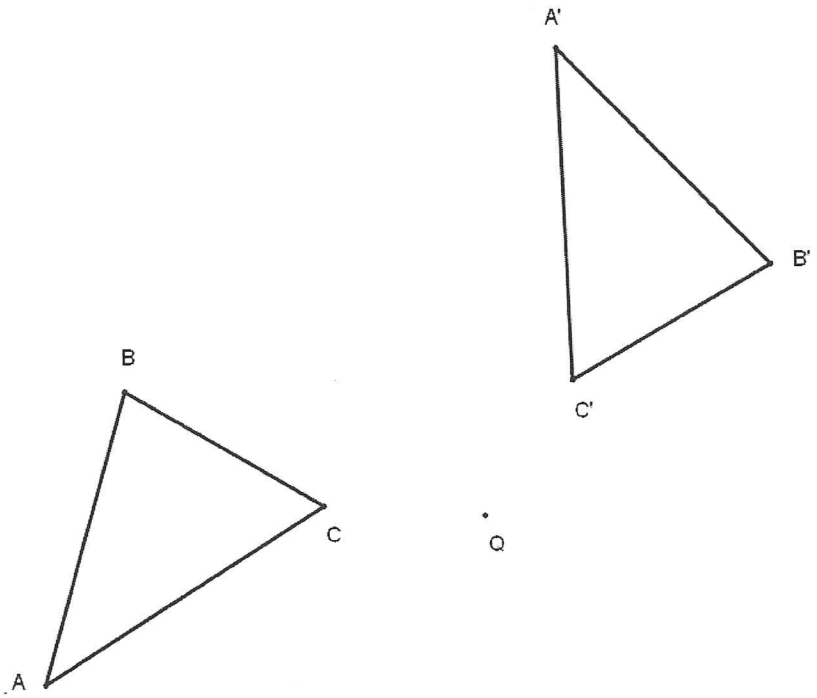
10. Draw the image of $\triangle LMN$ after rotating 40° CCW about pt Q.



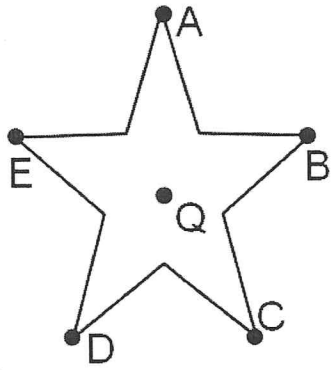
11. Describe the rotation of $\triangle ABC$ shown below.



12. Describe the rotation that maps $\triangle ABC$ onto it's image by giving the distance and direction. The rotation was a multiple of five.



13. Describe the rotation about Pt. Q that does the following:

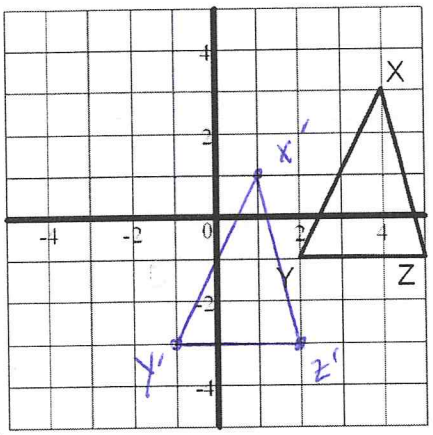


a) Maps Pt A onto Pt C
b) Maps Pt C onto Pt A
c) Maps Pt E onto Pt B
d) Maps Pt D onto Pt B

Geometry Review Quiz #1 Sec 9-1 to 9-3 Fall 2013 ANSWERS

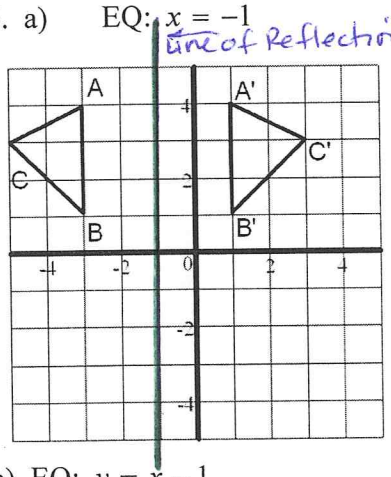
1. Translate 2 units left and 3 units up. 2. $(x,y) \rightarrow (x-3, y+5)$

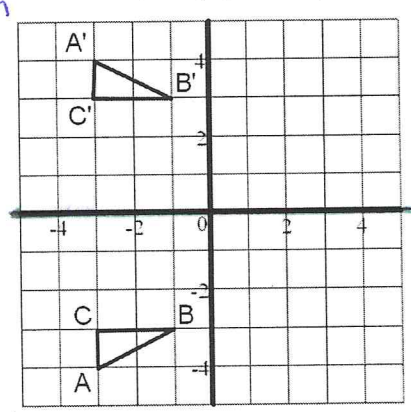
3. Draw and label the image of $\triangle XYZ$ after the following translation: $(x,y) \rightarrow (x-3, y-2)$



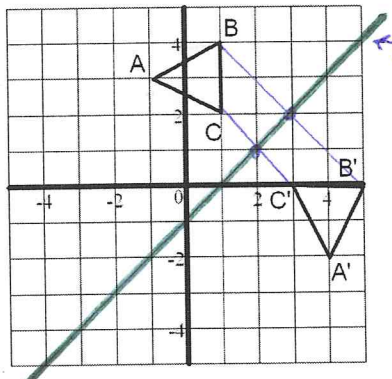
4. $E'(13,-25)$ $F'(17,-24)$ $G'(14,-23)$ 5. $(x,y) \rightarrow (x+6, y-4)$

6. a) EQ: $x = -1$ b) EQ: $y = 0$ (x-axis)





c) EQ: $y = x - 1$



Line of Reflection

7. Coordinates of the image are given:

a) $P'(-2,-1)$ $Q'(-1,-4)$ $R'(-3,-2)$ b) $P'(2,1)$ $Q'(1,4)$ $R'(3,2)$

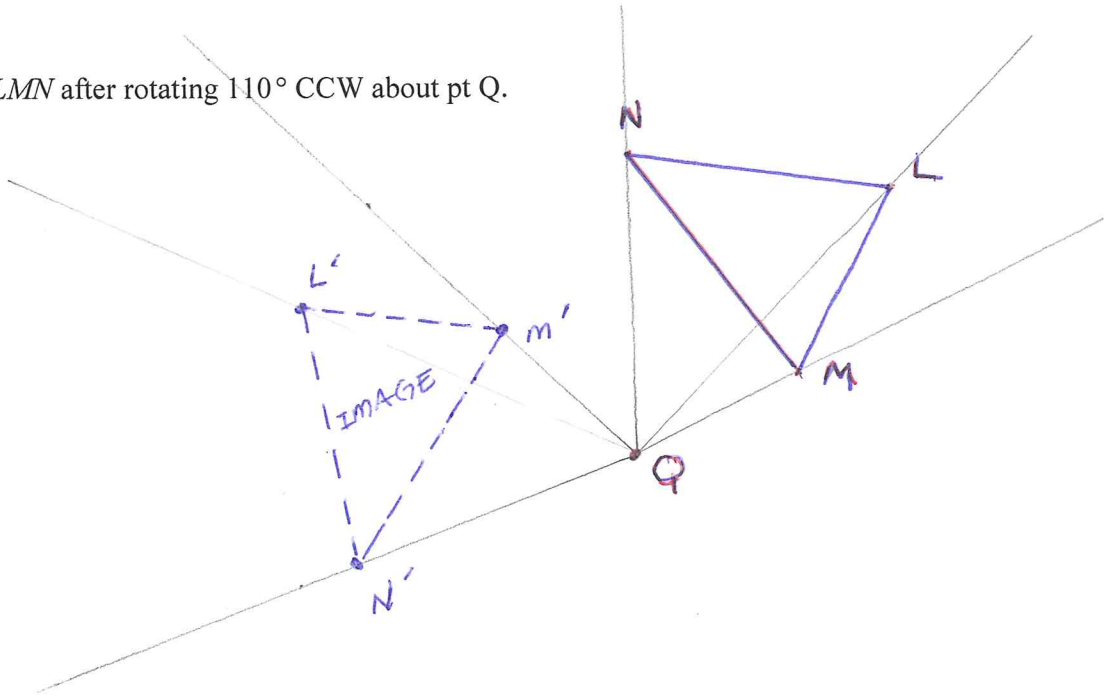
c) $P'(6,1)$ $Q'(5,4)$ $R'(7,2)$ d) $P'0,-1)$ $Q'(3,0)$ $R'(1,-2)$

8. a) $A'(5,-8)$ b) $A'(5,-6)$ c) $A'(-9,6)$ d) $A'(-5,6)$ e) $A'(-3,-4)$

9. a) $A'(0,-3)$ $B'(4,-3)$ $C'(2,-5)$ b) $A'(-3,0)$ $B'(-3,-4)$ $C'(-5,-2)$

c) $A'(0,3)$ $B'(-4,-3)$ $C'(-2,-5)$

10. Draw the image of $\triangle LMN$ after rotating 110° CCW about pt Q.



11. 90° CCW or 270° CW

12. 120° CW or 240° CCW

13. a) 144° CW or 216° CCW
b) 216° CW or 144° CCW
c) 144° CW or 216° CCW
d) 216° CW or 144° CCW