

Geometry DAY 1.4

Classwork – ALL Reflections

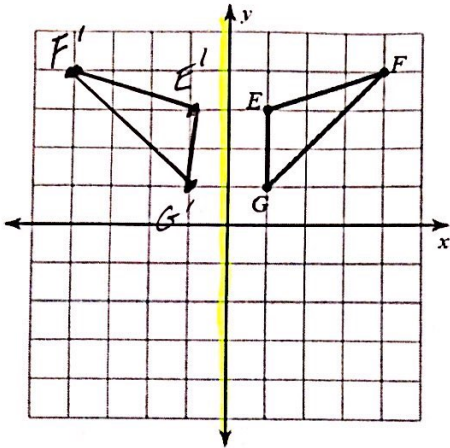
Rules
 $y=x \quad (x,y) \rightarrow (y,x)$
 $y=-x \quad (x,y) \rightarrow (-y,-x)$

Name: _____

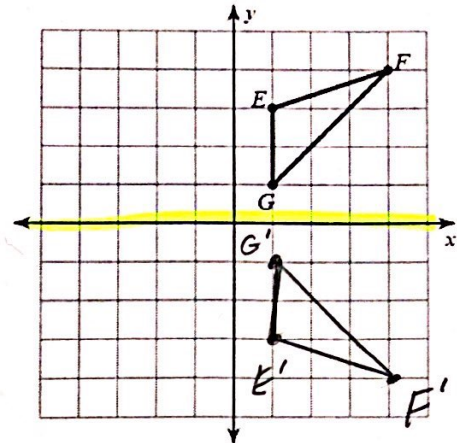
Date: _____

For #1 – 6, draw the triangle after each transformation and give the coordinates of A', B' and C'.

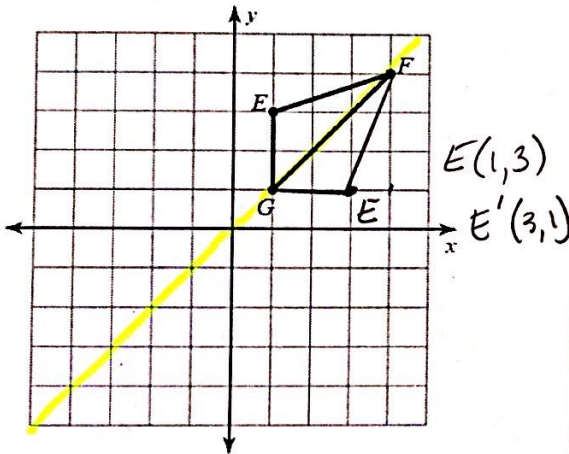
1. Reflect the triangle over the y-axis.



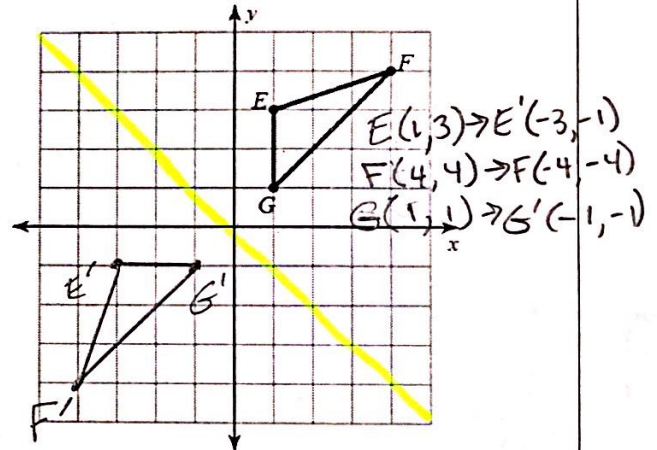
2. Reflect the triangle over the x-axis.



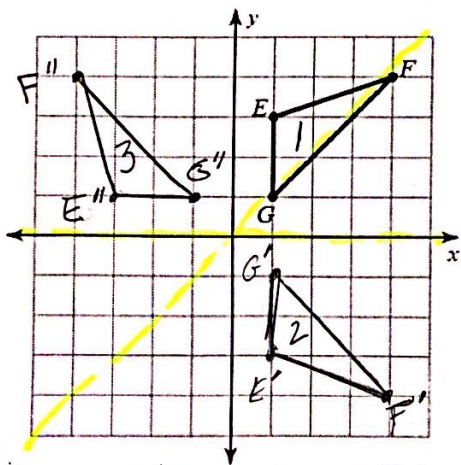
3. Reflect the triangle over $y = x$.



4. Reflect the triangle over $y = -x$.

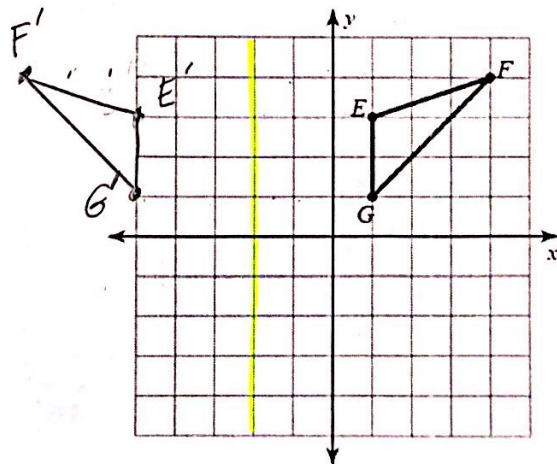


5. Reflect the triangle over the x-axis and then over $y = x$.



$E'(1,-3) \rightarrow E''(-3,1)$
 $F'(4,-4) \rightarrow F''(-4,4)$
 $G'(1,-1) \rightarrow G''(-1,1)$

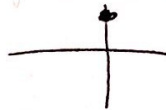
6. Reflect the triangle over $x = -2$.



Complete.

7. After a reflection over the line $y = x$, $(8, 11)$ is the image of point C. What is the original location of point C? $C(11, 8)$

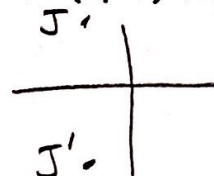
8. After a reflection over the y-axis, $(0, 4)$ is the image of point L. What is the original location of point L? $L(0, 4)$



Point L is on the y-axis.

9. The reflection of $J(-1, 11)$ is $J'(-1, -11)$. What is the reflection of $D(5, -5)$ if the point is reflected across the same line? $D'(5, 5)$

What is the line of reflection? Reflection over x-axis



10. The reflection of $K(-2, 8)$ is $K'(8, -2)$. What is the reflection of $L(10, -3)$ if the point is reflected across the same line? $L'(-3, 10)$

What is the line of reflection? Reflection over $y = x$

11. Given triangle JBN with coordinates $J(4, 5)$, $B(-1, -7)$, and $N(-7, 8)$, find the image of point B after a reflection over the line $y = x$. $B'(-7, -1)$

12. After a reflection over the x-axis, $(5, 10)$ is the image of point N. What is the original location of point N? $N(5, -10)$

13. Given triangle ONA with coordinates $O(-4, 1)$, $N(11, -12)$ and $A(-7, -9)$, find the image of point O after a reflection over the x-axis. $O'(-4, -1)$

14. Given triangle UCJ with coordinates $U(-12, 7)$, $C(4, 2)$, and $J(-3, 9)$, find the image of point C after a reflection over the y-axis. $C'(-4, 2)$

15. The reflection of $H(-10, -11)$ is $H'(10, -11)$. What is the reflection of $N(8, 10)$, if the point is reflected across the same line? $N'(-8, 10)$

What is the line of reflection? Reflection over y-axis