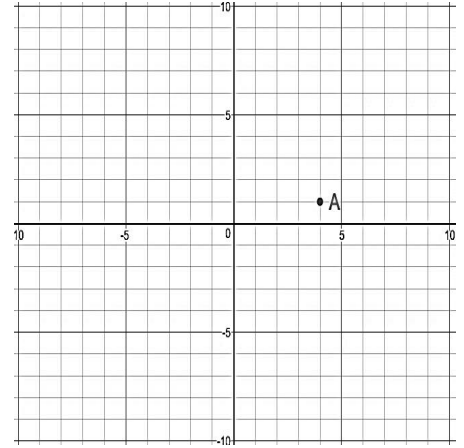


10.4H You Spin Me Left Round, Baby

Name: _____ Per: _____

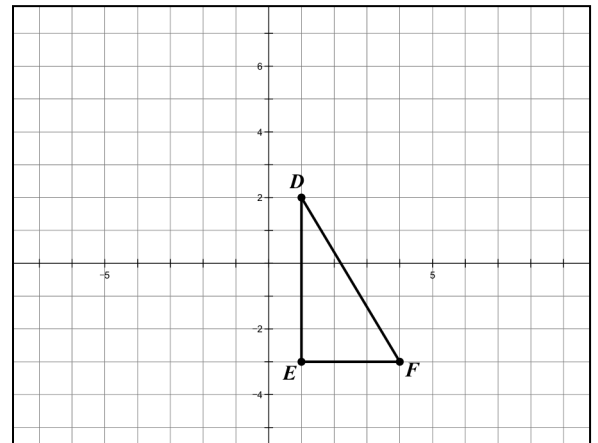
SHOW YOUR WORK AND WORK IN PENCIL

1. Use point **A** as your pre-image. Complete the following:
 - a. Rotate A about the origin 90° (counter-clockwise), label as A'
 - b. Reflect A over x -axis, label as A'' .
 - c. Translate A up 3 units and left 7. Label as A''' .
 - d. Write the translation rule for part c. _____
 - e. What is the distance from A to A''' . _____
 - f. Reflect point A across the line $y = -x$. Label as A^4 .
 - g. Explain how you reflected A across the line $y = -x$ using the definition of reflection. _____



2. Use the image of $\triangle DEF$ to answer the following.

- a. Rotate the triangle 90° about point $(-2, -1)$.
Label your new triangle as $\triangle D'E'F'$
- b. How many more rotations of 90° would you need to perform to $\triangle D'E'F'$ to rotate the triangle back on to itself? _____ Explain: _____
- c. In a different color, rotate $\triangle DEF$ 180° about point D and label as $\triangle D''E''F''$
- d. How many more rotations would you need to perform to $\triangle D''E''F''$ to rotate the triangle back on to itself? _____ Explain: _____

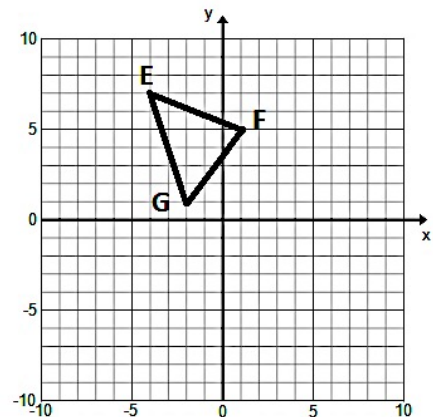
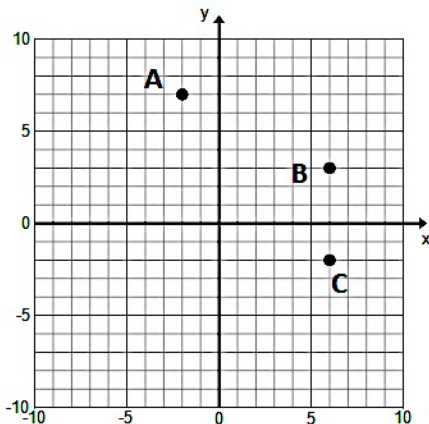


- e. If you rotated $\triangle DEF$ 270° , how many more rotations of 270° would you need to rotate it back on to itself? _____ Explain: _____
- f. If you rotated $\triangle DEF$ 45° , how many more rotations of 45° would you need to rotate it back on to itself? _____ Explain: _____

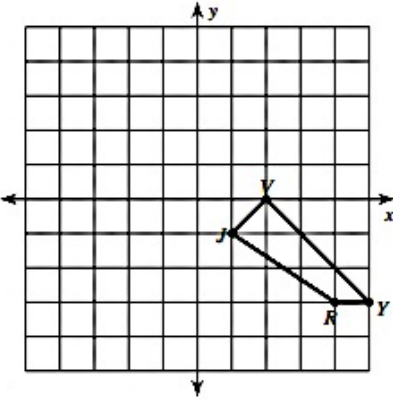
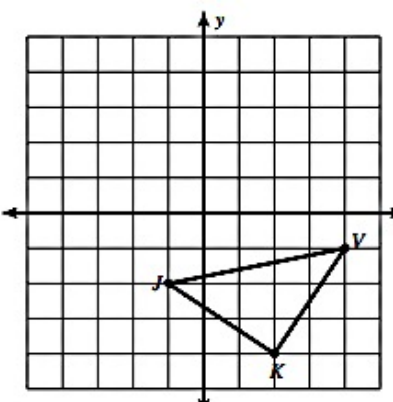
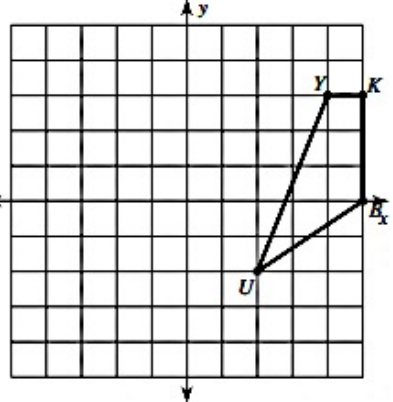
3. Rotate the following **about the point asked** and accurately label each new image:

- a. Rotate A 90° about the origin. Label A'
- b. Rotate B 180° about the origin Label B'
- c. Rotate C 270° about the origin. Label C'

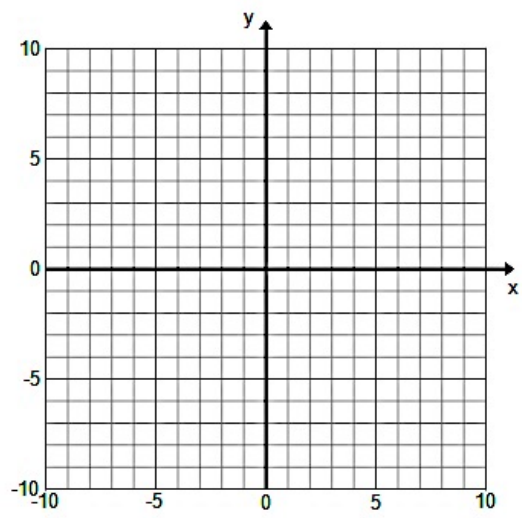
- d. Rotate $\triangle EFG$ 90° about $(2, -2)$
- e. Rotate $\triangle EFG$ 180° about $(2, -2)$
- f. Rotate $\triangle EFG$ 270° about $(2, -2)$



4. From #3, what degree rotation would map A onto B? (Use a protractor.) _____ A onto C? _____
5. Perform the following rotations and label your new image.

<p>a. Rotate 180° about $(-1,2)$</p> 	<p>b. Rotate 90° about $(0,1)$</p> 	<p>c. Rotate 45° about the origin</p> 
---	--	---

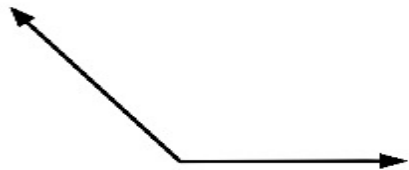

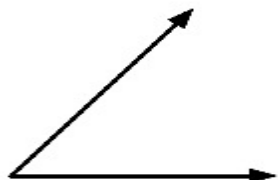
6. On the grid to the right, plot points $A(-7, 6)$; $B(1, 4)$; $C(9, -8)$
- Construct** the line of reflection between points A and B and label one point of rotation that would rotate A onto B.
 - Find the line of reflection algebraically. (**Must be done for credit.**)



- Construct** the line of reflection between points B and C and find one point of rotation that maps B onto C.
- Find the line of reflection algebraically.

e. Explain what you know about the point of rotation that maps A onto both B and C. **Name that point.**

7. Construct angle bisectors for the following angles.

8. You take out a loan for \$1,200 at 7% interest agree to pay it off in one payment in 15 years.
- Write the explicit equation if it is **simple interest**.
 - How much will you owe in 15 years (simple interest)?
 - Write the explicit equation if it is **compound interest**.
 - How much will you owe in 15 years (compound interest)?