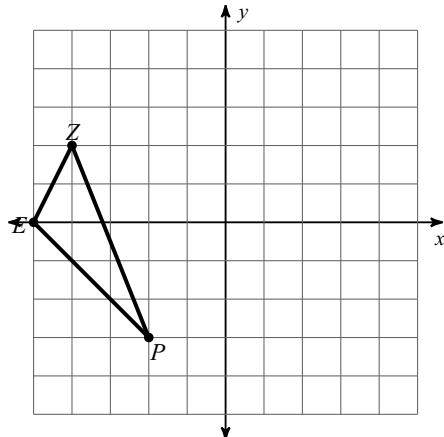


## 13.3a Rotations Day 1

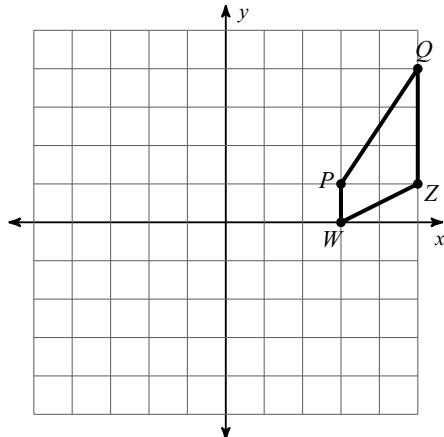
Due Date \_\_\_\_\_ Period \_\_\_\_\_

**Graph the image of the figure using the transformation given. Then find the coordinates of the vertices of the image (the figure after the rotation).**

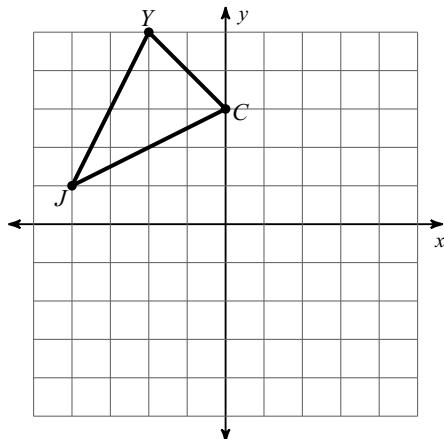
- 1) rotation
- $180^\circ$
- about the origin



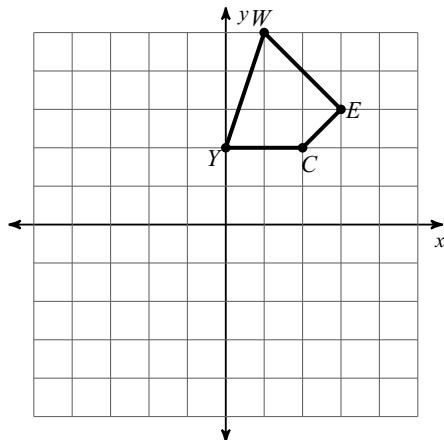
- 2) rotation
- $90^\circ$
- clockwise about the origin



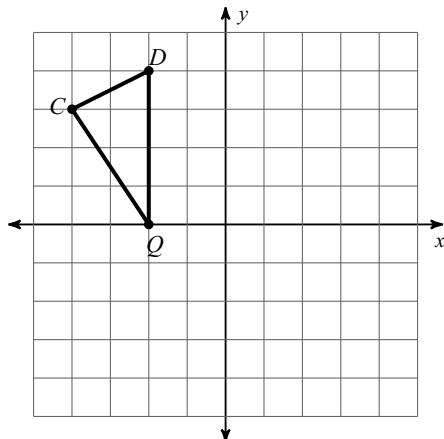
- 3) rotation
- $90^\circ$
- counterclockwise about the origin



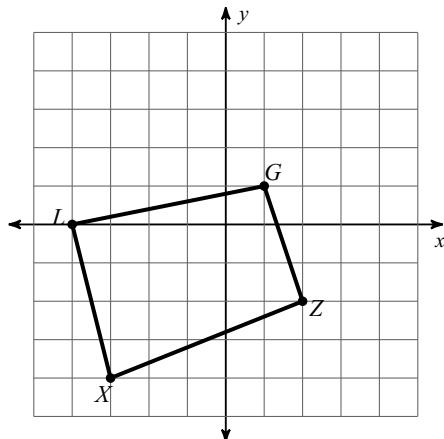
- 4) rotation
- $180^\circ$
- about the origin



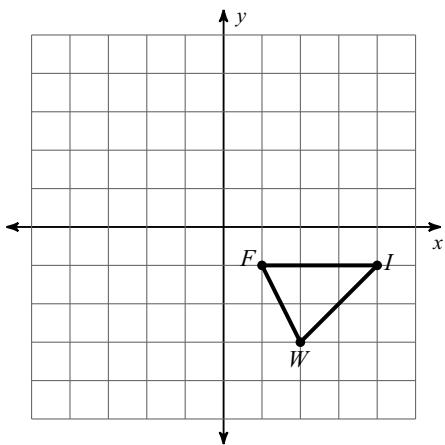
- 5) rotation
- $180^\circ$
- about the origin



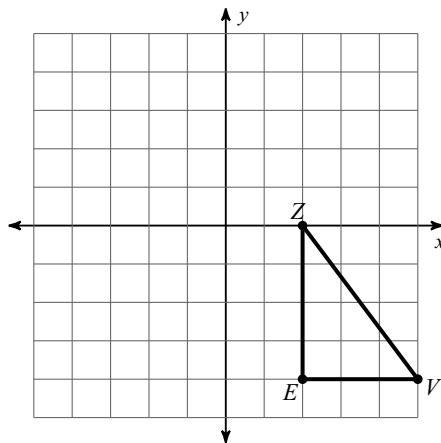
- 6) rotation
- $90^\circ$
- clockwise about the origin



7) rotation  $90^\circ$  clockwise about the origin

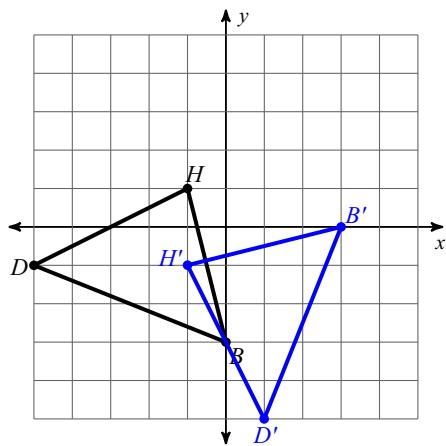


8) rotation  $90^\circ$  counterclockwise about the origin

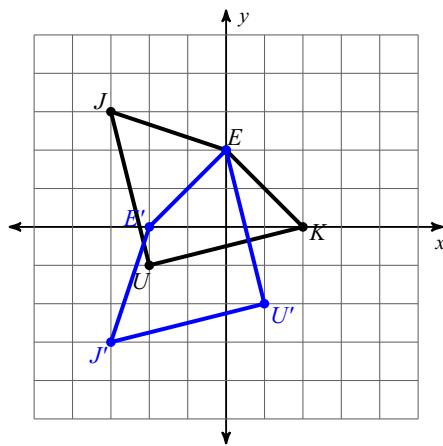


**Write a rule to describe each transformation.**

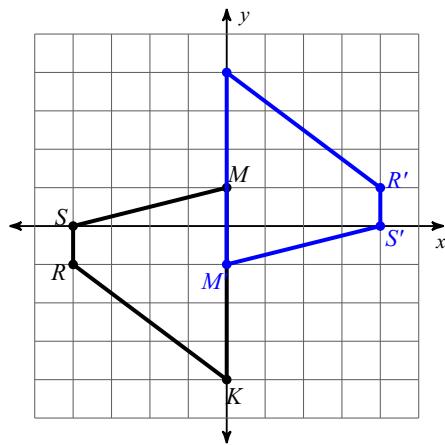
9)



10)



11)



12)

