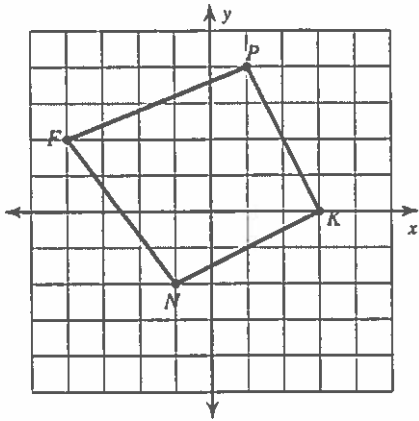


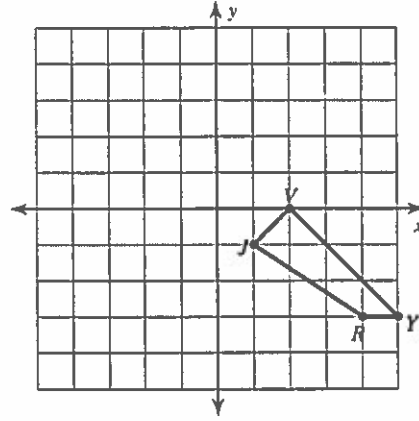
Rotations

Graph the image of the figure using the transformation given.

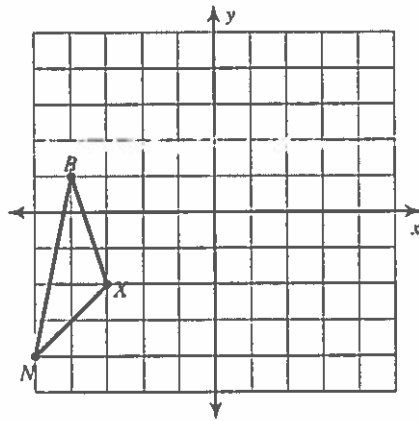
1) rotation  $180^\circ$  about the origin



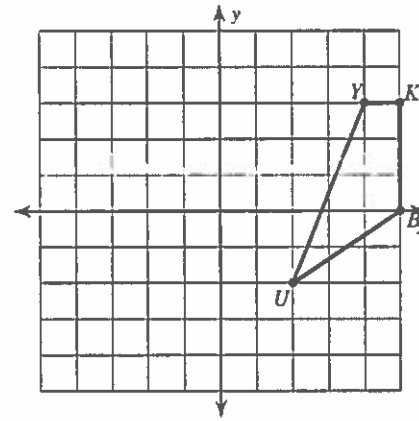
2) rotation  $180^\circ$  about the origin



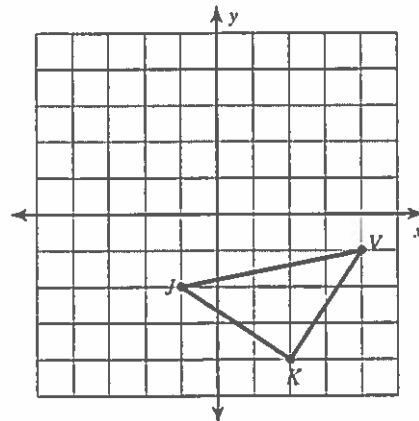
3) rotation  $90^\circ$  counterclockwise about the origin



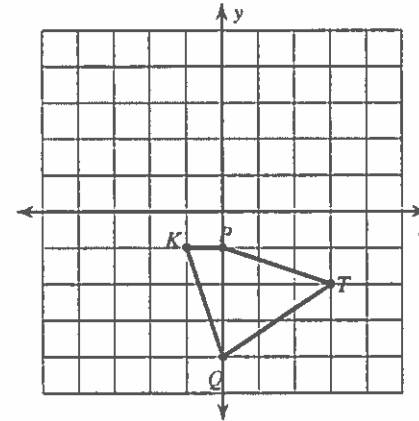
4) rotation  $90^\circ$  clockwise about the origin



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



6) rotation  $180^\circ$  about the origin

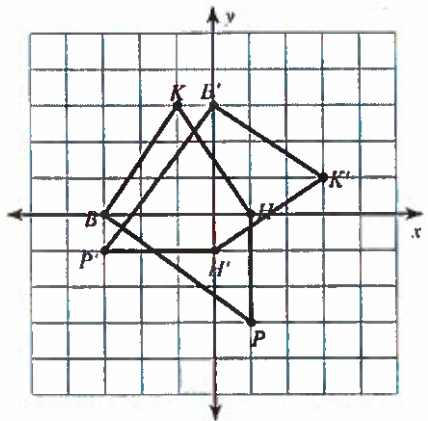


$$R_{90^\circ}(x, y) \rightarrow (-y, x)$$

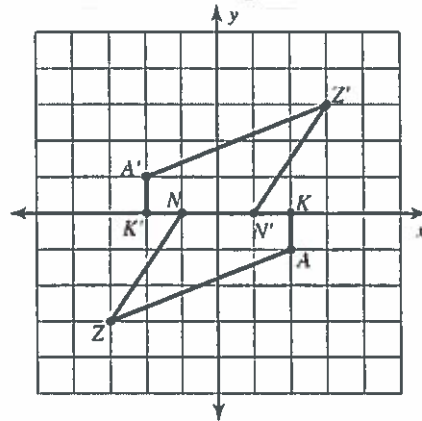
$$R_{180^\circ}(x, y) \rightarrow (-x, -y)$$

Write a rule to describe each transformation.

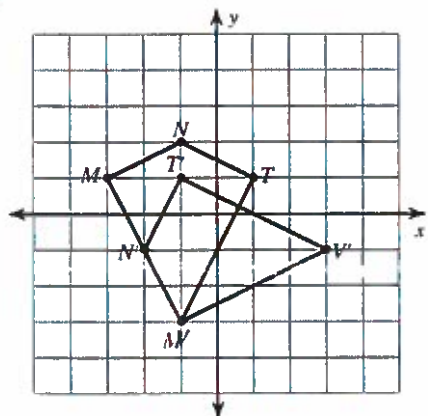
7)



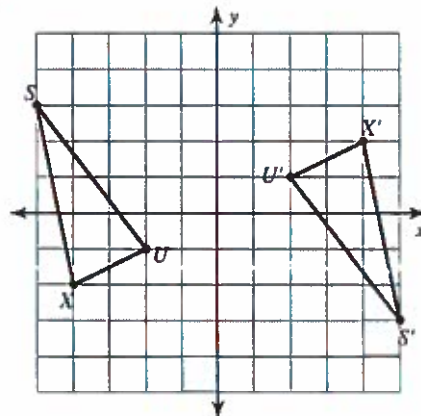
8)



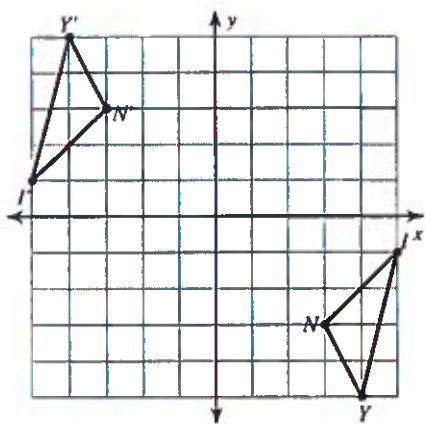
9)



10)



11)



12)

