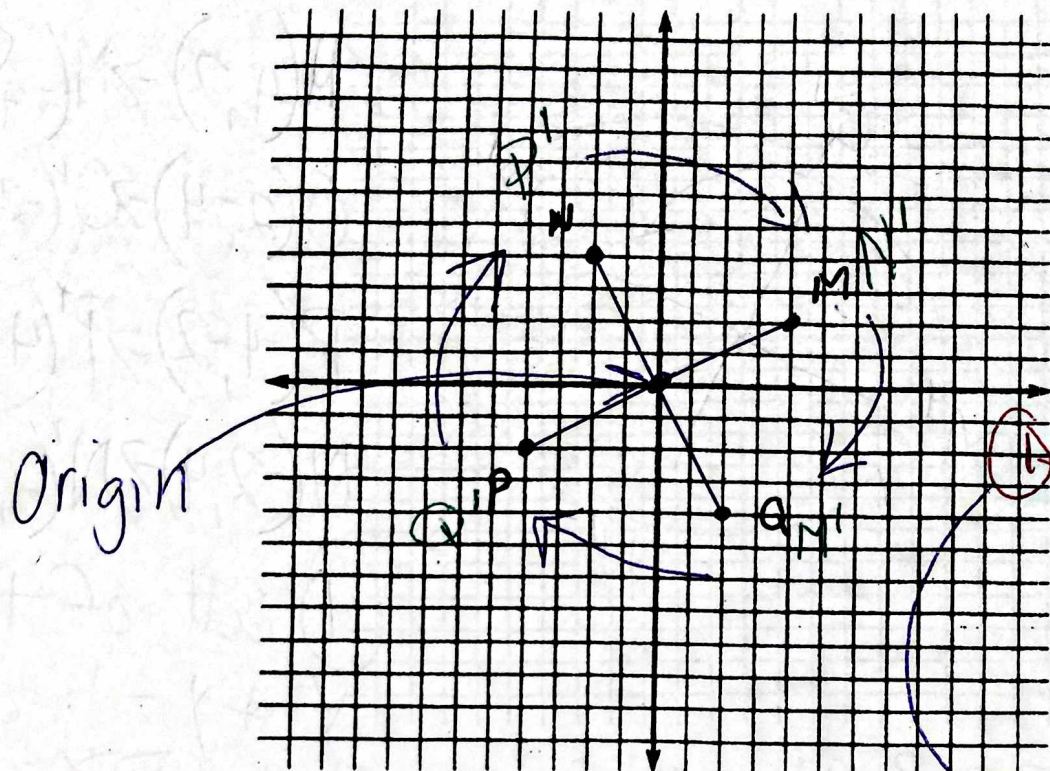


# Rotations - 90° - Clockwise



$$M(4,2) \rightarrow M'(2,-4)$$

$$Q(2,-4) \rightarrow Q'(-4,-2)$$

$$P(-4,2) \rightarrow P'(-2,4)$$

$$N(-2,4) \rightarrow N'(4,2)$$

① Switch  $x+y$

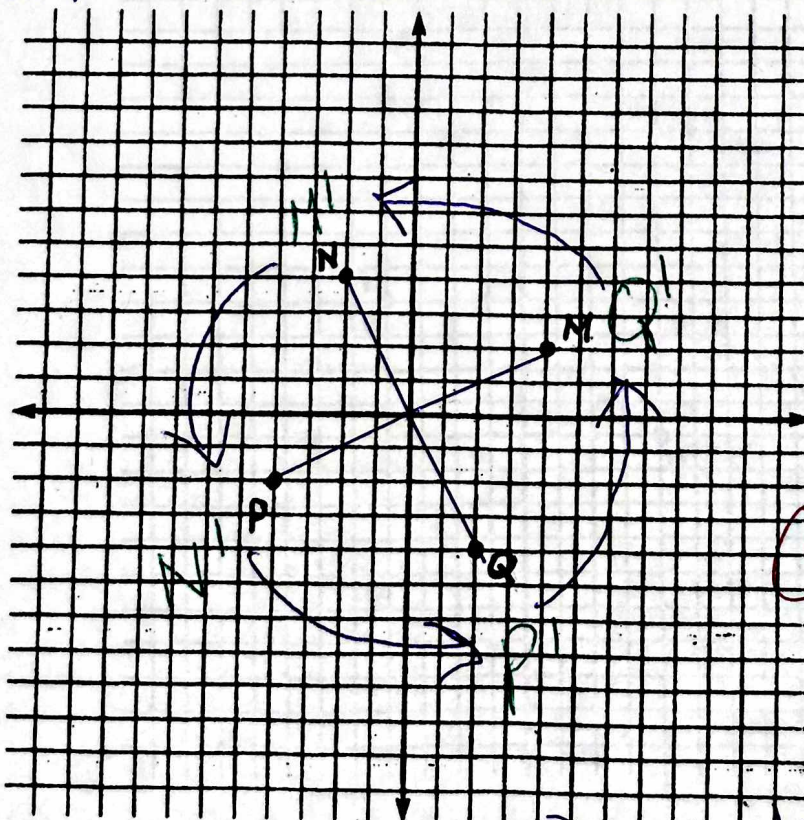
$$M(2,-4)$$

$$Q(-4,-2)$$

$$P(-2,4)$$

$$N(4,2)$$

# Rotation - 90° Counter Clockwise



$$M(4,2) \rightarrow M'(-2,4)$$

$$Q(2,-4) \rightarrow Q'(4,2)$$

$$P(-4,2) \rightarrow P'(2,-4)$$

$$N(-2,4) \rightarrow N'(-4,-2)$$

① Switch  $x+y$

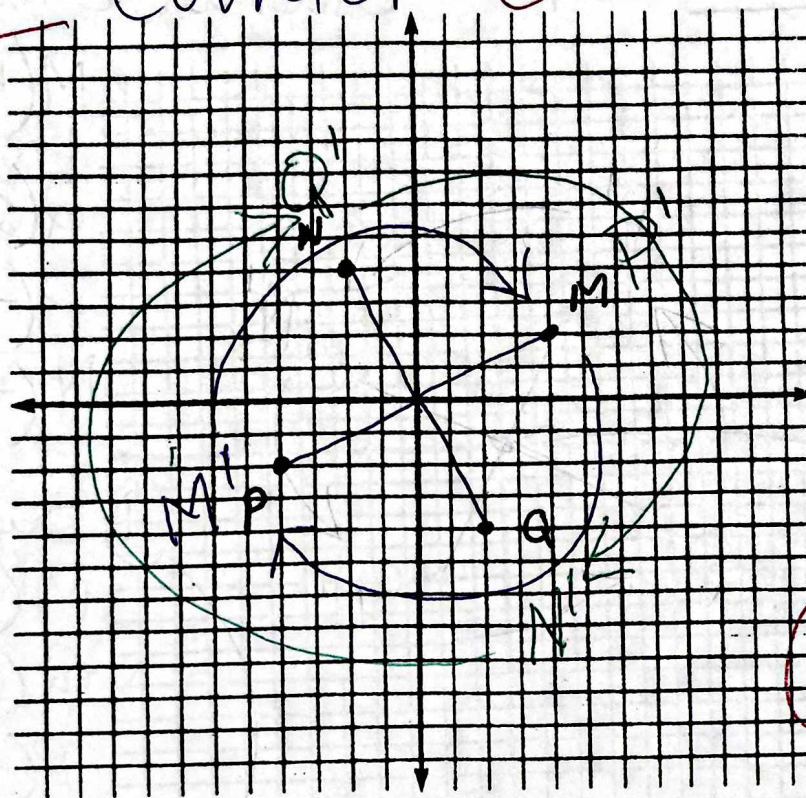
$$M(2,4)$$

$$Q(+4,2)$$

$$P(+2,-4)$$

② opposite of new  $x$   $N(-4,-2)$

# 180° - Counter-Clockwise



$$M(4,2) \rightarrow M'(-4,-2)$$

$$Q(2,-4) \rightarrow Q'(-2,4)$$

$$P(-4,-2) \rightarrow P'(4,-2)$$

$$N(-2,4) \rightarrow N'(2,-4)$$

(1) all of the  
x & y - become  
the opposite.

# ?? 270° Clockwise

