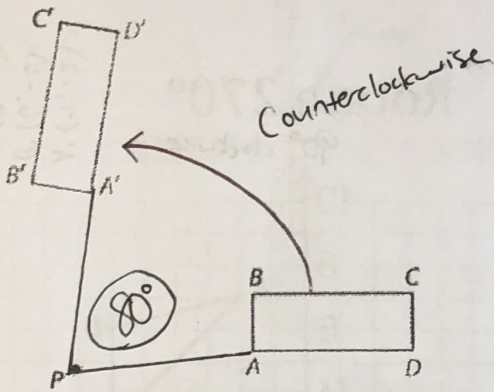
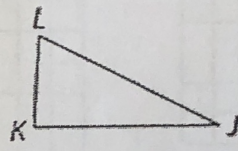
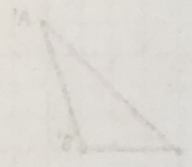
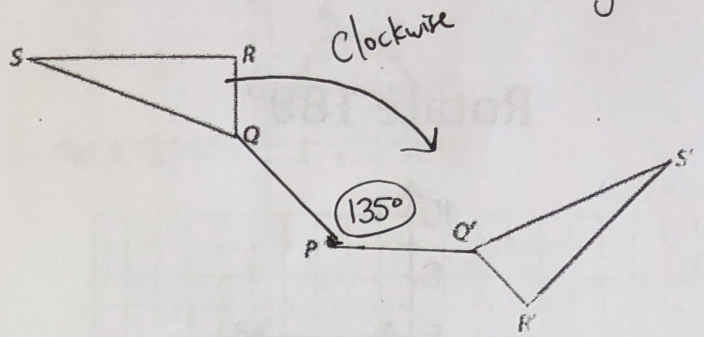


# Rotations

Key

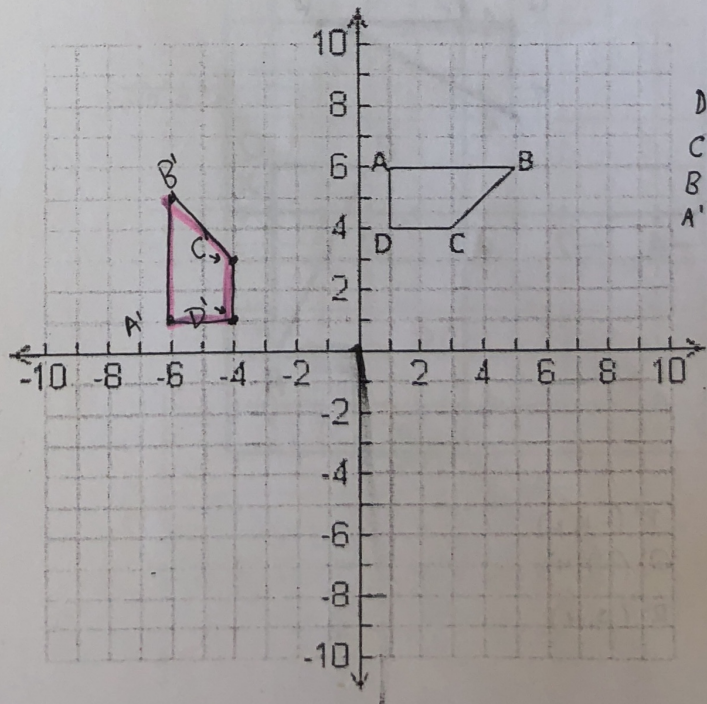
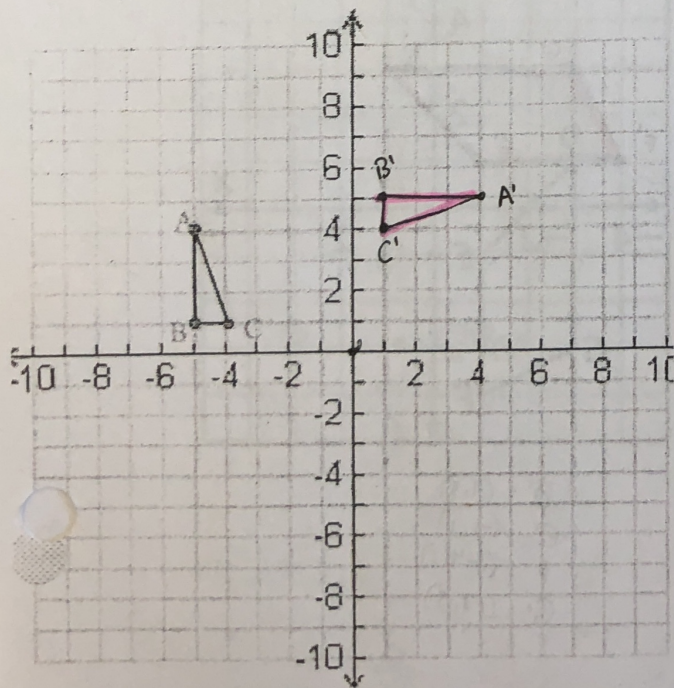


Counterclockwise rotation of  $40^\circ$  around point  $P$



Rotate  $90^\circ$  clockwise about the origin

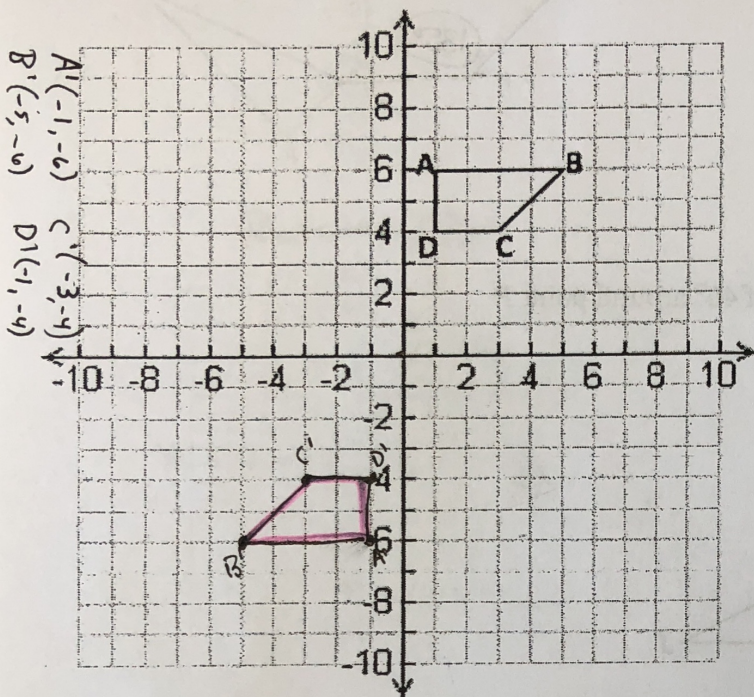
Rotate  $90^\circ$  counterclockwise about the origin



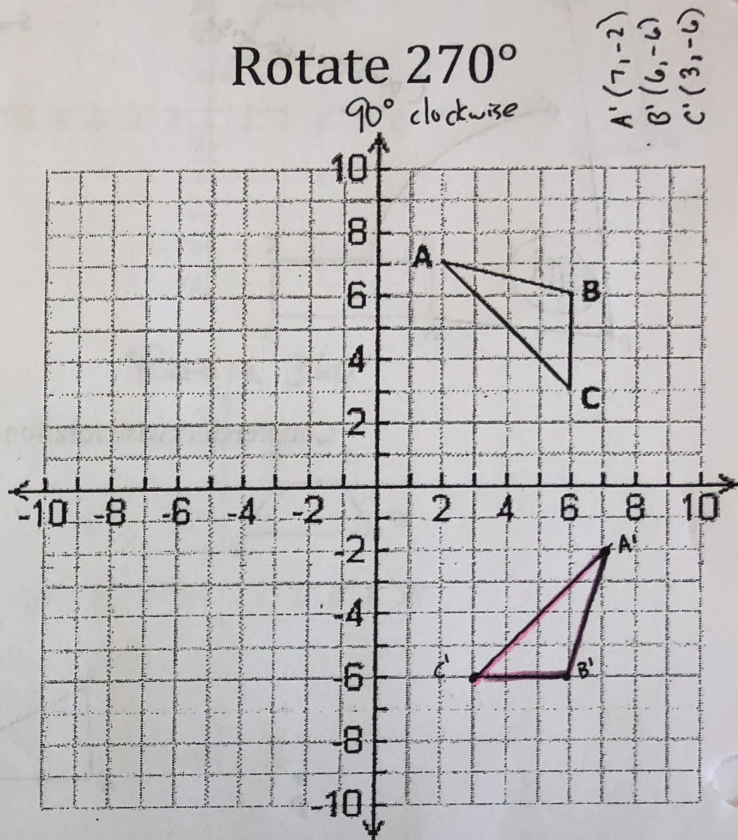
- $D'(-4, 1)$
- $C'(-4, 3)$
- $B'(-6, 5)$
- $A'(-6, 1)$

**NOTE: ROTATIONS ARE ALWAYS COUNTERCLOCKWISE AND AROUND THE ORIGIN UNLESS SPECIFIED OTHERWISE!**

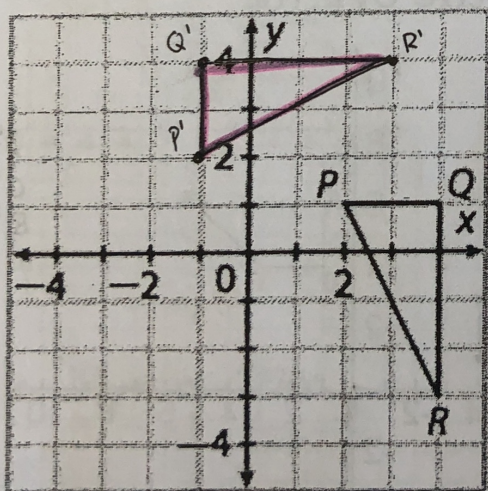
Rotate  $180^\circ$



Rotate  $270^\circ$

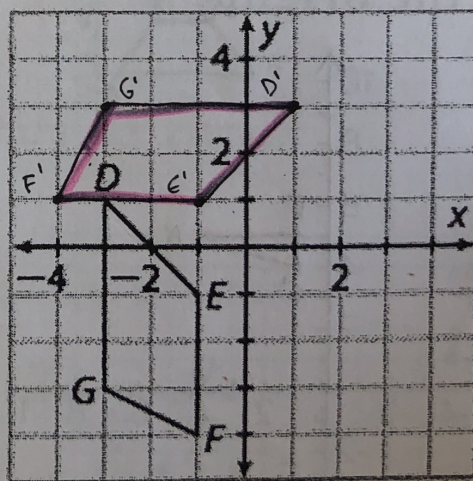


$\triangle PQR$ ;  $90^\circ$



$P'(-1, 2)$   
 $Q'(-1, 4)$   
 $R'(3, 4)$

Quadrilateral  $DEFG$ ;  $270^\circ$



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