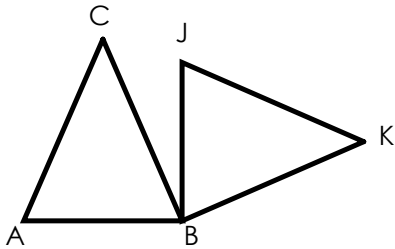


Independent Practice

Describe a transformation that would map $\triangle ABC$ onto $\triangle JBK$



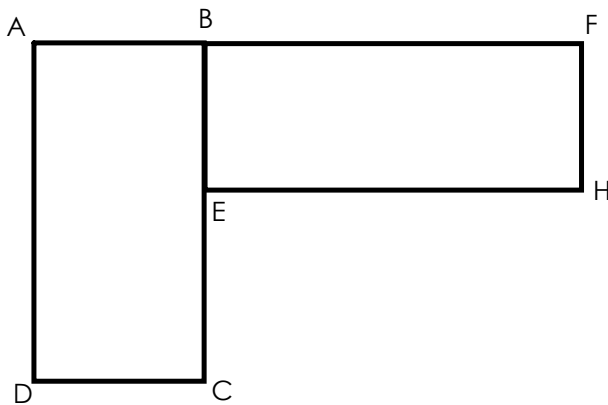
Center of Rotation: Point B

Direction: Clockwise

Angle of Rotation: 90°

A rotation of 90° Clockwise
centered at point B
maps $\triangle ABC$ onto $\triangle JBK$

Describe a transformation that would map rectangle ABCD onto rectangle EBFH



Center of Rotation: Point B

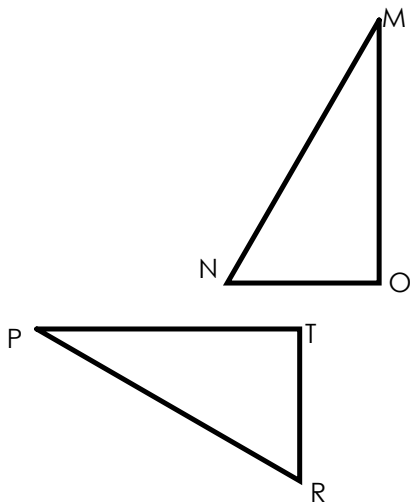
Direction: Counter Clockwise

Angle of Rotation: 90°

A rotation of 90° Counter Clockwise
centered at point B
maps ▭ ABCD onto ▭ EBFH

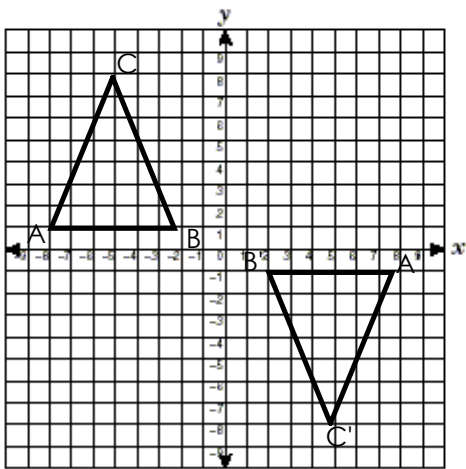
*You must always say the point of rotation, the direction, and the amount of degrees it is rotated.

Describe a transformation that maps $\triangle MNO$ onto $\triangle PRT$



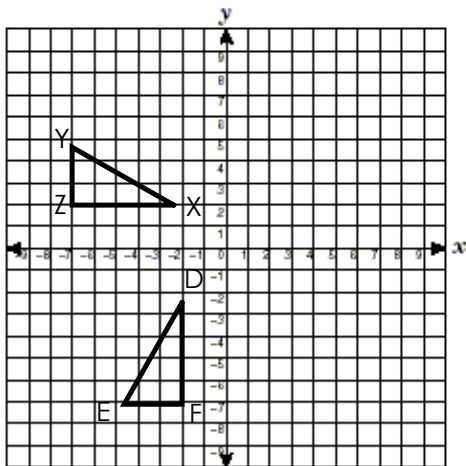
First, a translation along line OT

Then, a rotation of 90° Counter Clockwise
centered at point T
maps $\triangle MNO$ onto $\triangle PRT$



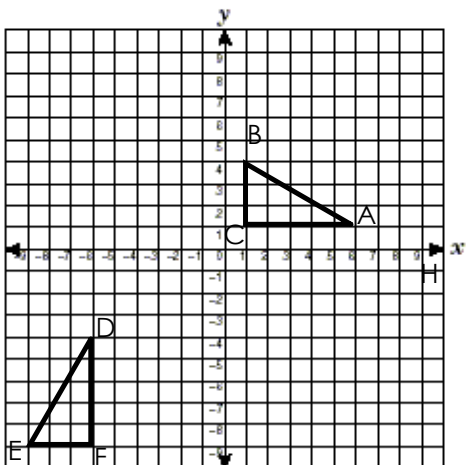
Describe the rotation to map $\triangle ABC$ onto $\triangle A'B'C'$

A rotation of 180° clockwise
 centered at point (0,0)
 maps _____ onto _____



Describe the rotation to map $\triangle XYZ$ onto $\triangle DEF$

A rotation of 90° counterclockwise
 centered at point (0,0)
 maps _____ onto _____



Describe a sequence of two transformations that maps $\triangle ABC$ onto $\triangle DEF$.

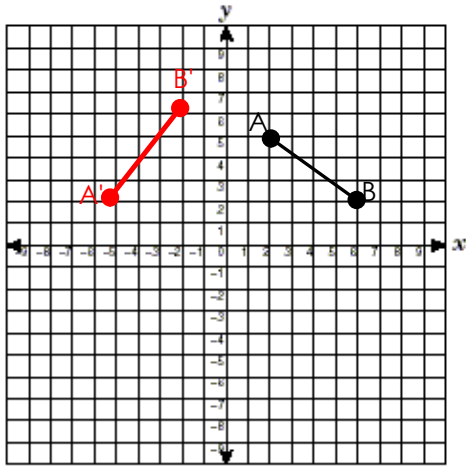
First transformation: _____

translation 10 down up and 7 units left

(please draw on coordinate plane as well)

Second transformation: _____

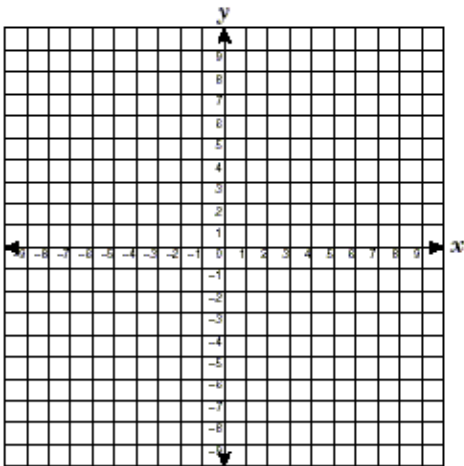
rotation of 90 degrees counter clockwise around point (-6,-9)



Rotate \overline{AB} 90° counter-clockwise around the origin. State the coordinates of the pre-image and image of the line.

$$A(\underline{2}, \underline{5}) \longrightarrow A'(\underline{-5}, \underline{2})$$

$$B(\underline{7}, \underline{2}) \longrightarrow B'(\underline{-2}, \underline{6})$$



Triangle DEF has coordinates D(-6,-8), E(-2,-7) and F(-4,-1). State the coordinates of triangle DEF after a 270° rotation

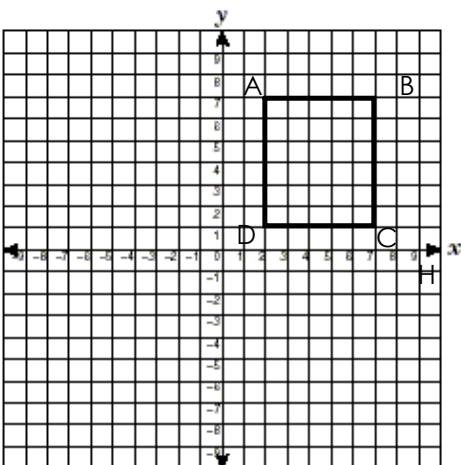
$$D(\underline{-6}, \underline{-8}) \longrightarrow D'(\underline{-8}, \underline{6})$$

$$E(\underline{-2}, \underline{-7}) \longrightarrow E'(\underline{-7}, \underline{2})$$

$$F(\underline{-4}, \underline{-1}) \longrightarrow F'(\underline{-1}, \underline{4})$$

Prove $\triangle DEF = \triangle D'E'F'$ using the properties of rigid motions

A rotation is a rigid motion and rigid motions preserve the length of sides and angle measures



Reflect rectangle ABCD over the y-axis. Then, reflect $A'B'C'D'$ over the x-axis. State the coordinates of rectangle $A''B''C''D''$

$$A(2,7) \longrightarrow A'(-2,-7)$$

$$B(7,7) \longrightarrow B'(-7,-7)$$

$$C(7,1) \longrightarrow C'(-7,-1)$$

$$D(2,1) \longrightarrow D'(-2,-1)$$

Describe a rotation that could map ABCD onto $A''B''C''D''$

A rotation of 180 degrees clockwise around point (0,0)