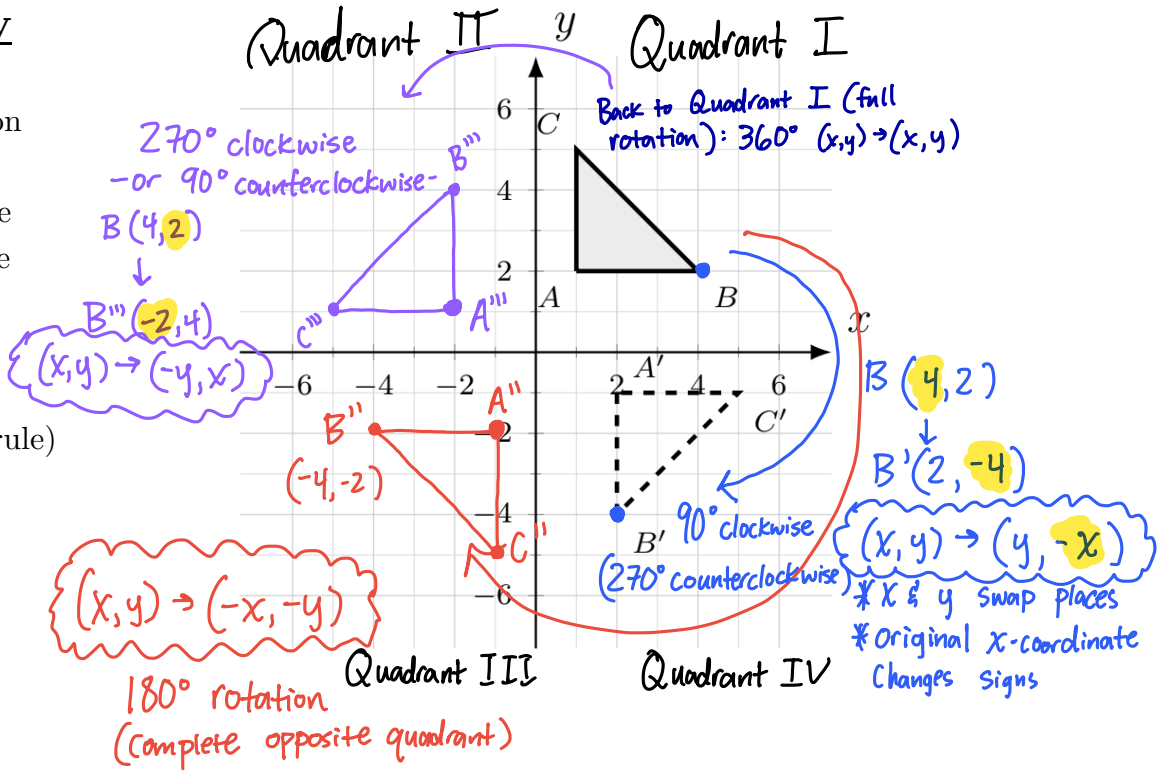
Artifact 4 – Rotations

Driving Question: How can any rotation be written as an algebraic rule?

Vocabulary

Rotation
Center of rotation
Clockwise
Counterclockwise
Coordinate plane
Origin
Orientation
Algebraic representation (rule)



36. Complete the rotation reference table. Every rotation is about the origin. Write each algebraic rule in the parentheses.

Rotation about the origin	Algebraic Rule
90° clockwise	$(x, y) \rightarrow$ (y , $-x$)
90° counterclockwise	$(x, y) \rightarrow$ ($-y$, x)
180° (clockwise or counterclockwise)	$(x, y) \rightarrow$ ($-x$, $-y$)
270° clockwise	$(x, y) \rightarrow$ ($-y$, x)
270° counterclockwise	$(x, y) \rightarrow$ (y , $-x$)
360°	$(x, y) \rightarrow$ (x , y)