# **180 Degrees Clockwise Rotation About the Origin**

How many turns is 180 degrees?

Point	Original Ordered Pair	Ordered Pair after 180 degrees clockwise Rotation about the origin
А		
В		
С		
D		
E		
F		

What do y	you notice	about the	crane?
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What do you notice about the ordered pairs?

Can you create a rule to describe what happens to ordered pairs when you rotate 180 degrees clockwise about the origin?

## **180 Degrees Counterclockwise Rotation About the Origin**

How many turns is 180 degrees?

Point	Original Ordered Pair	Ordered Pair after 180 degrees counterclockwise Rotation about the origin
Α		
В		
С		
D		
E		
F		

What do you notice about the ordered pairs?

What do you notice about the crane?

Can you create a rule to describe what happens to ordered pairs when you rotate 180 degrees counterclockwise about the origin?

Does it matter if the direction (clockwise/counterclockwise) is not listed?

# 90 Degrees Clockwise Rotation About the Origin

How many turns is 90 degrees?

Point	Original Ordered Pair	Ordered Pair after 90 degrees clockwise Rotation about the origin
Α		
В		
С		
D		
E		
F		

What do	you	notice	about	the	crane?
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What do you notice about the ordered pairs?

Can you create a rule to describe what happens to ordered pairs when you rotate 90 degrees clockwise about the origin?

## 90 Degrees Counterclockwise Rotation About the Origin

How many turns is 90 degrees?

Point	Original Ordered Pair	Ordered Pair after 90 degrees counterclockwise Rotation about the origin
А		
В		
С		
D		
E		
F		

hat do you notice about	the crane?	
hat do you notice about	the ordered pairs?	

Can you create a rule to describe what happens to ordered pairs when you rotate 90 degrees counterclockwise about the origin?

Does it matter if the direction (clockwise/counterclockwise) is not listed?

## **270 Degrees Clockwise Rotation About the Origin**

How many turns is 270 degrees?

Point	Original Ordered Pair	Ordered Pair after 270 degrees clockwise Rotation about the origin
А		
В		
С		
D		
E		
F		

What do yoเ	ı notice	about	the	crane?
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What do you notice about the ordered pairs?

Can you create a rule to describe what happens to ordered pairs when you rotate 270 degrees clockwise about the origin?

## **270 Degrees Counterclockwise Rotation About the Origin**

How many turns is 270 degrees?

Point	Original Ordered Pair	Ordered Pair after 270 degrees counterclockwise Rotation about the origin
А		
В		
С		
D		
Е		
F		

1		
What do you notice about	the crane?	
What do you notice about to	the ordered pairs?	

Can you create a rule to describe what happens to ordered pairs when you rotate 270 degrees counterclockwise about the origin?

Does it matter if the direction (clockwise/counterclockwise) is not listed?