Name:_____
Date:_____ Class Period:____

Rotations Notes

-A _____ is a transformation that _____ a figure around a _____, called the _____ _____ _____.

-Remember that a _____ is the set of all points that are the same _____ from a point called the _____.

-When you _____ a point around a _____ of rotation, it remains the same _____ from the center of rotation, just like a _____.

-So, a _____ is when all points in the _____-_____ are moved along _____ _____ determined by the center of _____ and _____ of rotation.

*When you are asked to rotate a figure, you must _____ each of the following:

1.
2.
3.

Rotating Counterclockwise about the Origin				
Angle of Rotation				
Angle in Opposite Direction				
How it is Rotated				
Coordinate of Image				
Example				

Name:_____

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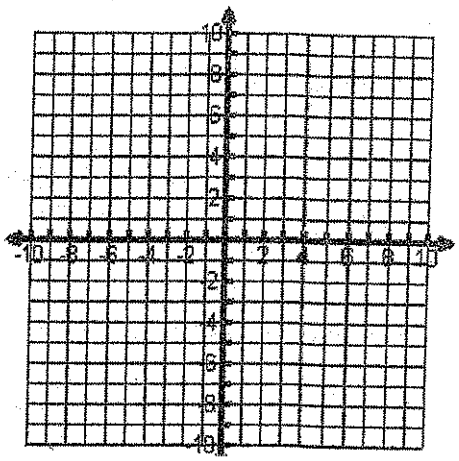
Examples: Rotate 90° counterclockwise about the origin.

A(–7, 3) ⟶ A'(,)

B(1, 4) ⟶ B'(,)

C(3, 1) ⟶ C'(,)

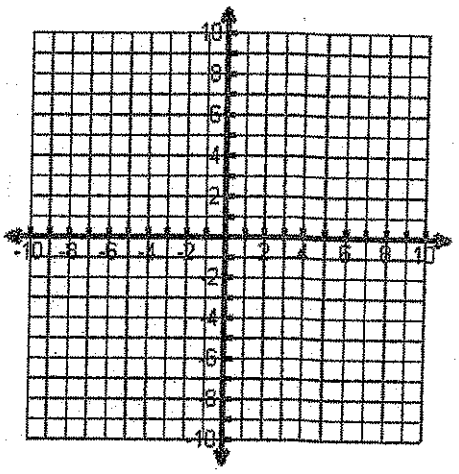


Examples: Rotate 180° counterclockwise about the origin.

A(–7, 3) ⟶ A'(,)

B(1, 4) ⟶ B'(,)

C(3, 1) ⟶ C'(,)

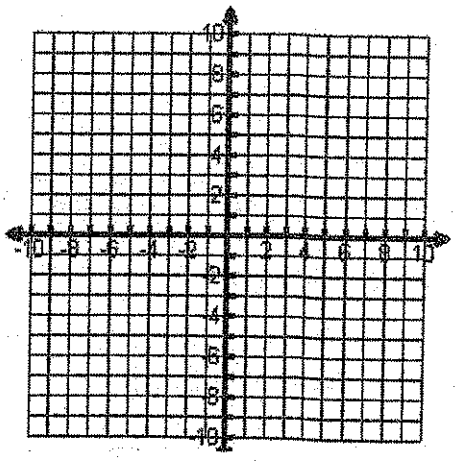


Examples: Rotate 270° counterclockwise about the origin.

A(–7, 3) ⟶ A'(,)

B(1, 4) ⟶ B'(,)

C(3, 1) ⟶ C'(,)

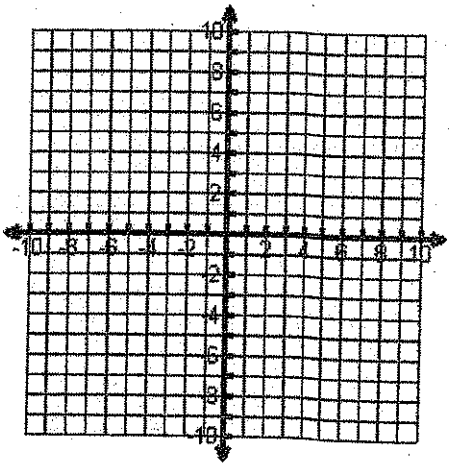


Examples: Rotate 360° counterclockwise about the origin.

A(–7, 3) ⟶ A'(,)

B(1, 4) ⟶ B'(,)

C(3, 1) ⟶ C'(,)



Name: Key
Date: _____ Class Period: ____

Rotations Notes

-A rotation is a transformation that turns a figure around a point, called the center of rotation.

-Remember that a circle is the set of all points that are the same distance from a point called the center.

-When you rotate a point around a center of rotation, it remains the same distance from the center of rotation, just like a circle.

-So, a rotation is when all points in the pre-image are moved along circular arcs determined by the center of rotation and angle of rotation.

*When you are asked to rotate a figure, you must determine each of the following:

1. center of rotation
2. angle of rotation
3. Direction of rotation → counterclockwise by default

Rotating Counterclockwise about the Origin				
Angle of Rotation	90°	180°	270°	360°
Angle in Opposite Direction	-270°	-180°	-90°	0°
How it is Rotated	+	+	+	+
Coordinate of Image	$(-y, x)$	$(-x, -y)$	$(y, -x)$	(x, y)
Example	$R_{90°}$ A(-1,-2) A'(2,-1)	$R_{180°}$ A(-1,-2) A'(1,2)	$R_{270°}$ A(-1,-2) A'(-2,1)	$R_{360°}$ A(-1,-2) A'(-1,-2)