Today you will need:

- **1. Your homework** (p. 81 and 82; check your work with your neighbor and try to complete whatever you couldn't do at home. I will come around and help.)
- **2. The new ROTATIONS** sheet for your transformation packet (*by the door*).
- 3. Your book.
- 4. Your notes.

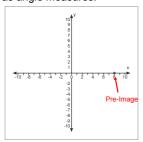
Lesson 2.3 - Rotations

Key concepts:

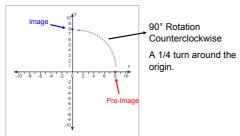
Point/Center of Rotation

Coordinate notation for specific rotations

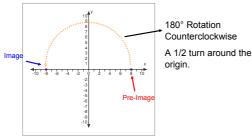
Rotations are measured in degrees, and are EXACTLY the same as angle measures:



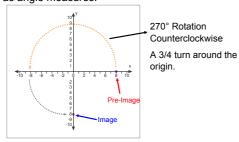
Rotations are measured in degrees, and are EXACTLY the same as angle measures:



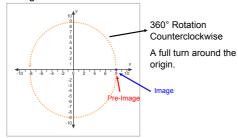
Rotations are measured in degrees, and are EXACTLY the same as angle measures:



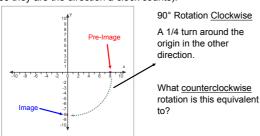
Rotations are measured in degrees, and are EXACTLY the same as angle measures:



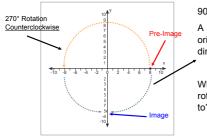
Rotations are measured in degrees, and are EXACTLY the same as angle measures:



Rotations in the other direction are called <u>clockwise rotations</u> (because they are the direction a clock counts):



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90° Rotation <u>Clockwise</u> A 1/4 turn around the

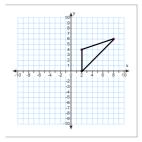
origin in the other direction.

What <u>counterclockwise</u> rotation is this equivalent

WRITE THIS DOWN!!!!!!

Rotations are <u>ALWAYS</u> counterclockwise unless otherwise specified.

Rotating around the origin (0,0).



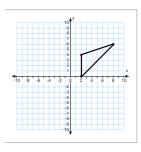
Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) **→**(-y , x)

A(2,4)......B'() B(2,0).....B'() C(8,6)......C'()

Direction of Rotation: ______
Degree of Rotation: _____

Rotating around the origin (0,0).



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

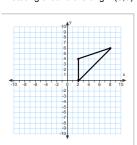
(x,y) **→**(-x , -y)

A(2,4)......A'() B(2,0).....B'() C(8,6)......C'()

Direction of Rotation: ______

Degree of Rotation: _____

Rotating around the origin (0,0).



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

 $(x,y) \longrightarrow (y, -x)$

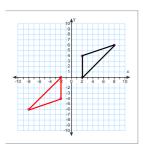
A(2,4)A'()
B(2,0)B'()
C(8.6)C'()

Direction of Rotation: _____

These are worth memorizing if you can:

Rules for Rotations Around the Origin on a Coordinate Plane		
90° rotation counterclockwise	$(x,y)\to (-y,x)$	
180° rotation	$(x, y) \rightarrow (-x, -y)$	
270° rotation counterclockwise	$(x, y) \rightarrow (y, -x)$	

What combination of reflections results in a 180° rotation?



Transform pre-image ABC to image A'B'C' using the following coordinate notation:

(x,y) → (-x , -y)

A(2,4)	A'(-2,-4
B(2,0)	B'(-2,0)
C(8.6)	C'(-8 -6