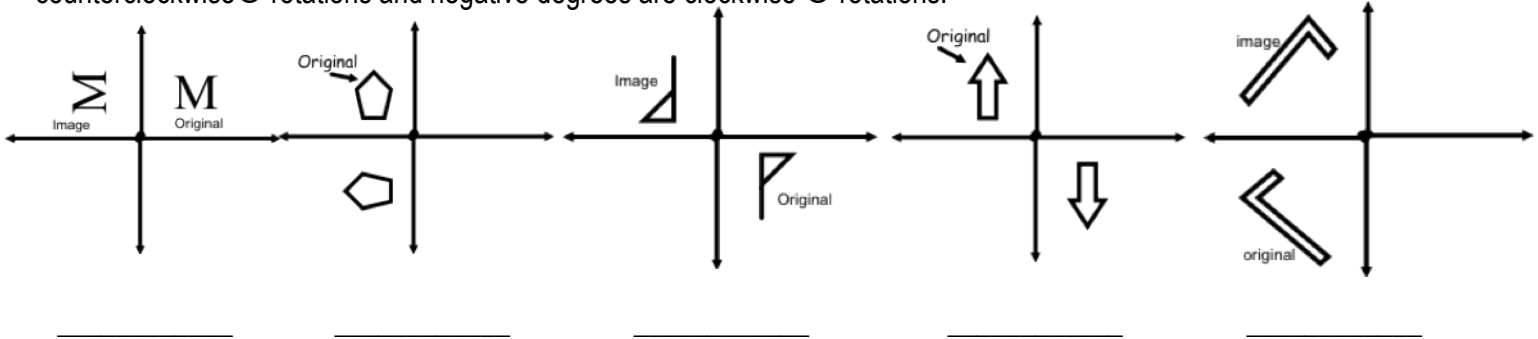


**SLO: I can identify and perform rotations.** Problems worthy of attack prove their worth by fighting back. —Piet Hein THE ROAD TO WISDOM? Well, it's plain and simple to express. Err and err and err again, but less and less and less. —Piet Hein.

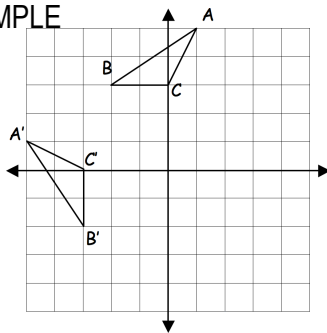
**VOCABULARY (have your vocabulary sheet out EVERY day)**

(1) TO DO: For each original below, write the degree and direction of the rotation on the graph. Positive degrees are counterclockwise  $\curvearrowright$  rotations and negative degrees are clockwise  $\curvearrowleft$  rotations.



(2) TO DO: For each diagram, (A) describe the transformation (include prime notation and the words rotation, origin, clockwise, counterclockwise, image and pre-image) (B) Write the coordinate notation, and (C) Write the short notation.

**EXAMPLE**

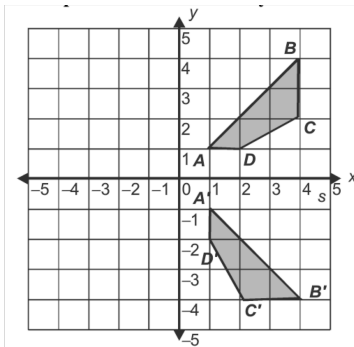


(A) The preimage ABC was rotated 90° about the origin resulting in the image A'B'C'. This was a counterclockwise rotation.

(B) (-y, x) preimage image

(C) R<sub>90°</sub>

1)

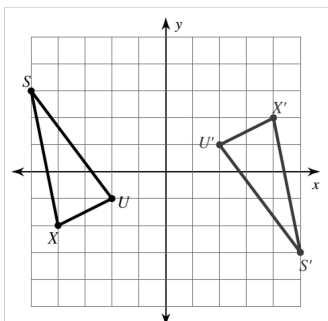


(A) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(B) \_\_\_\_\_ preimage image

(C) \_\_\_\_\_

2)



(A) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

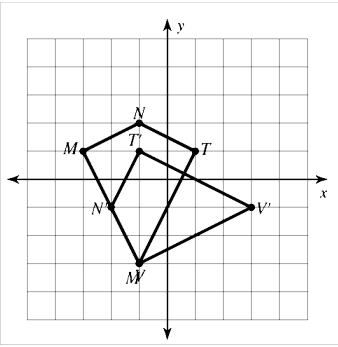
(B) \_\_\_\_\_ preimage image

(C) \_\_\_\_\_

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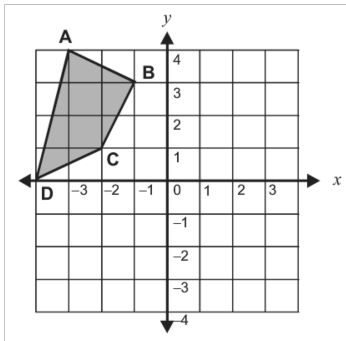
3)



- (A) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- (B) \_\_\_\_\_ preimage image
- (C) \_\_\_\_\_

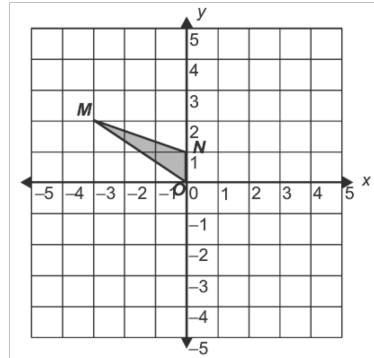
(2) Rotate each preimage according to the given rule. Label the image with prime notation. Write the coordinates for the preimage and the image. (It can help to rotate your paper, write down the coordinates of the new location, and then turn your paper to its original orientation and then plot and connect the points,

4)  $R_{90^\circ}$



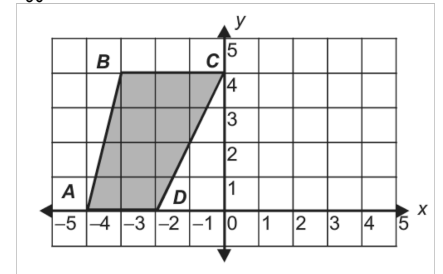
coordinates

5)  $R_{180^\circ}$



coordinates

6)  $R_{-90^\circ}$



coordinates

(2) TO DO: Summarize what you have learned today about rotations. What do you find easy to understand and what is confusing? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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coordinates

312 The coordinates of point  $A$  are  $(-3a, 4b)$ . If point  $A'$  is the image of point  $A$  reflected over the line  $y = x$ , the coordinates of  $A'$  are

- 1  $(4b, -3a)$
- 2  $(3a, 4b)$

coordinates

