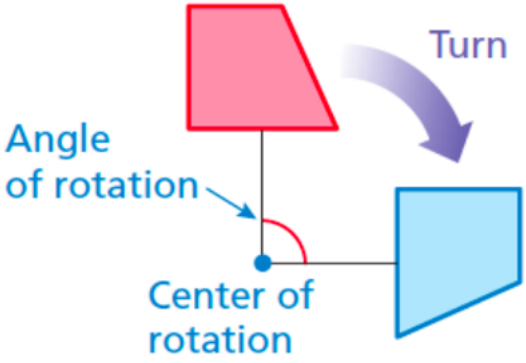
Name _____ Block _____ Date _____

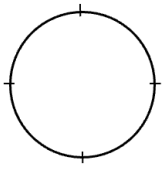
Rotation - Notes

A **rotation** is a transformation often referred to as a _____.

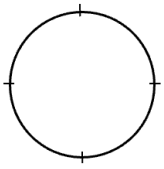


Rules for Rotation:

- Every point of the Image is rotated around the _____ of _____.
- Each point in the Image is _____ the same _____ of degrees in the same _____.
- Figures can be rotated _____ or _____ clockwise.



Clockwise

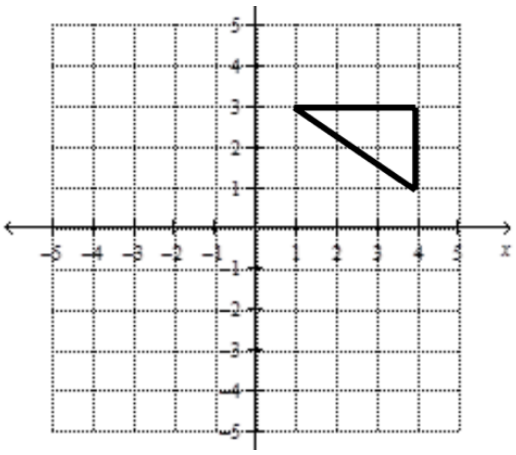


Counter Clockwise

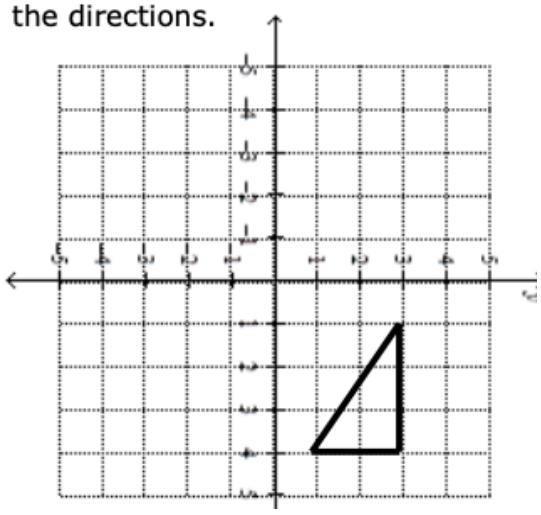
- The image and the preimage are _____.

How to do it yourself:

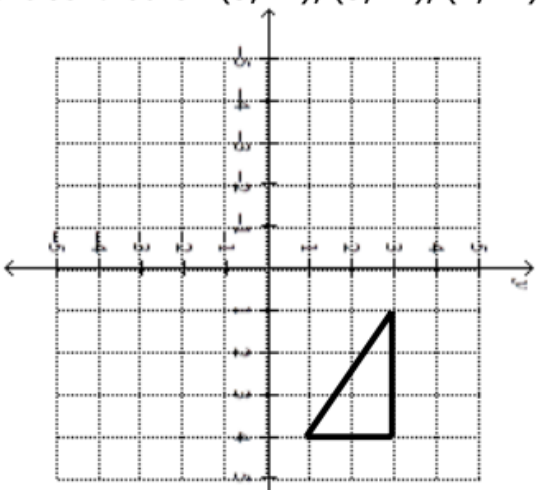
Rotate 90° clockwise around the origin.



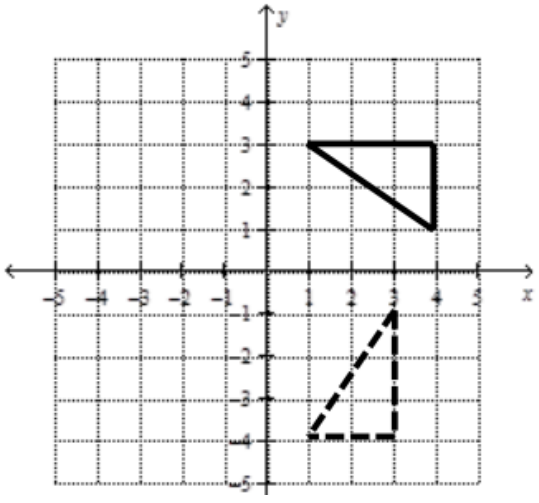
1 Rotate your paper according to the directions.



2 Write down the coordinates of the "new" figure as it looks. (3, -1), (3, -4), (1, -4)

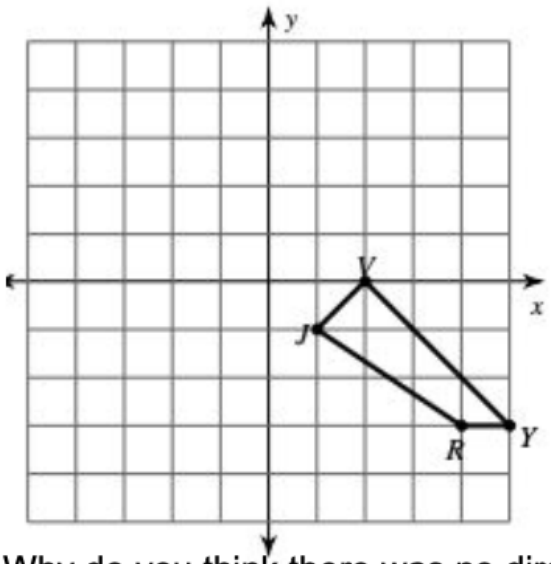


3 Turn your paper back and plot the points.



Example #2: rotate the given shape

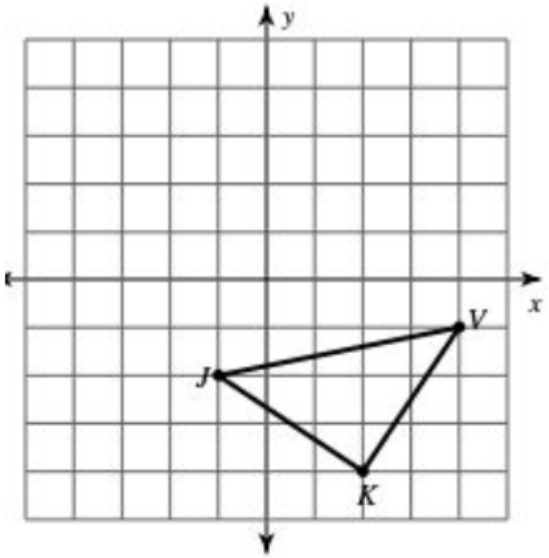
) rotation 180° about the origin



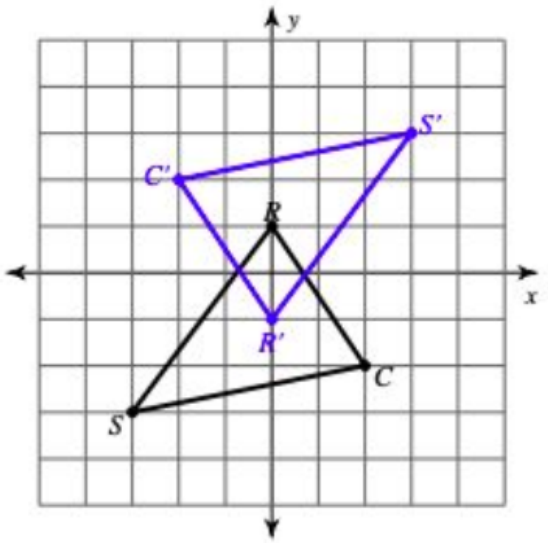
Why do you think there was no direction given for the rotation?

Example #3: rotate the given shape

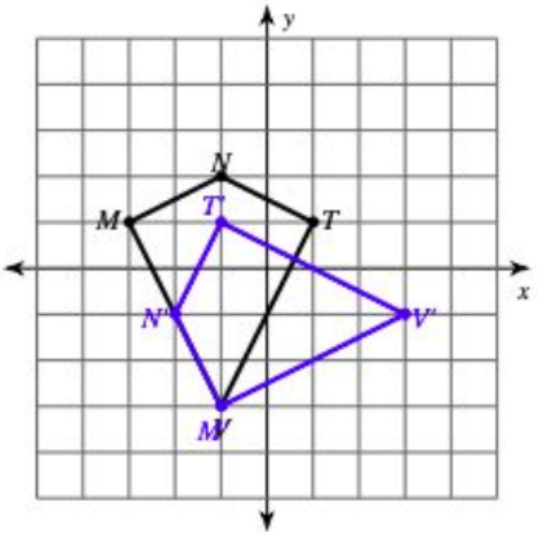
) rotation 90° clockwise about the origin



Example #4: write the rotation that must have occurred



Example #5: write the ***TWO*** rotations that could have occurred



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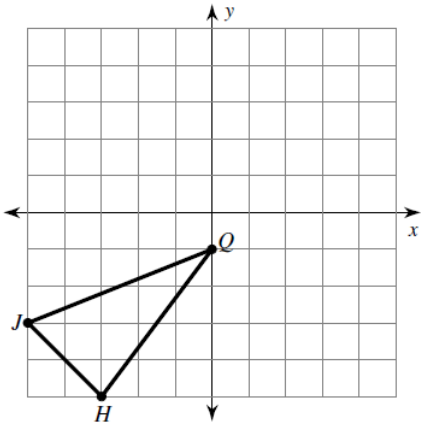
Rotations of Shapes

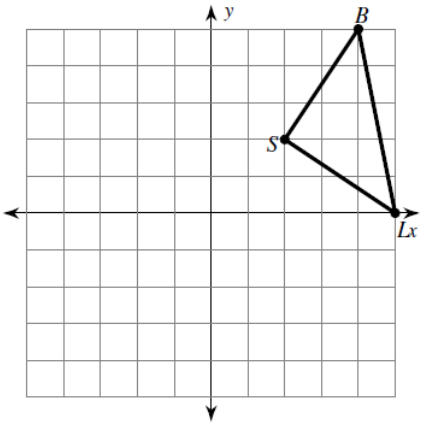
Date_____ Period____

Graph the image of the figure using the transformation given.

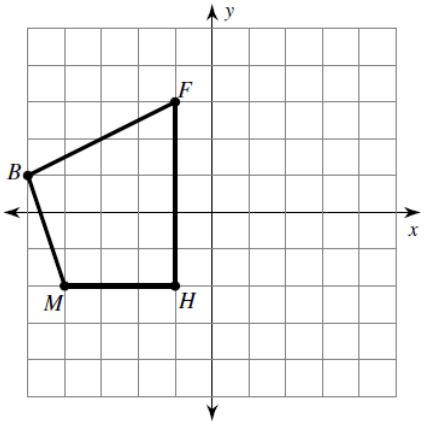
1) rotation 180° about the origin



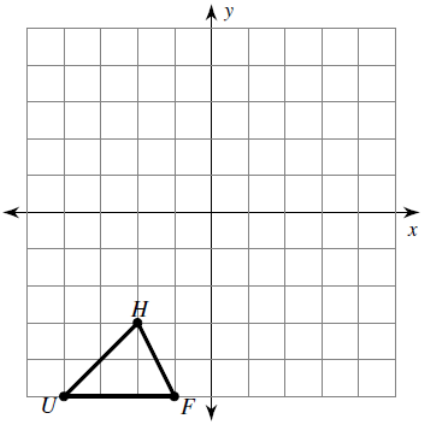
2) rotation 90° counterclockwise about the origin



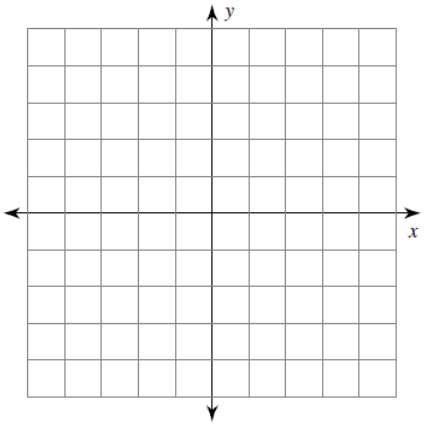
3) rotation 90° clockwise about the origin



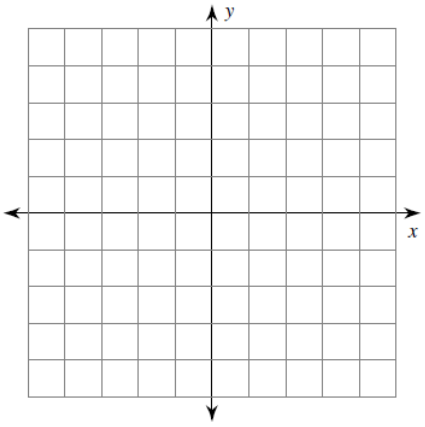
4) rotation 180° about the origin



5) rotation 90° clockwise about the origin
$U(1, -2)$, $W(0, 2)$, $K(3, 2)$, $G(3, -3)$



6) rotation 180° about the origin
$V(2, 0)$, $S(1, 3)$, $G(5, 0)$



Find the coordinates of the vertices of each figure after the given transformation.

7) rotation 180° about the origin
$Z(-1, -5)$, $K(-1, 0)$, $C(1, 1)$, $N(3, -2)$

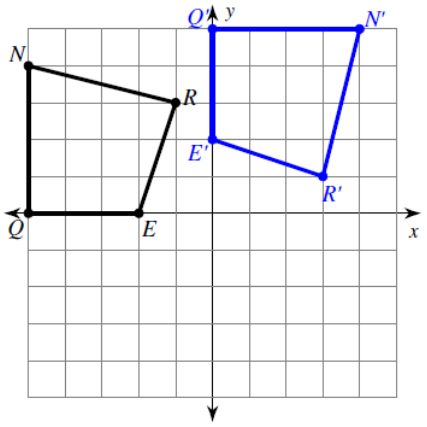
8) rotation 180° about the origin
$L(1, 3)$, $Z(5, 5)$, $F(4, 2)$

9) rotation 90° clockwise about the origin
$S(1, -4)$, $W(1, 0)$, $J(3, -4)$

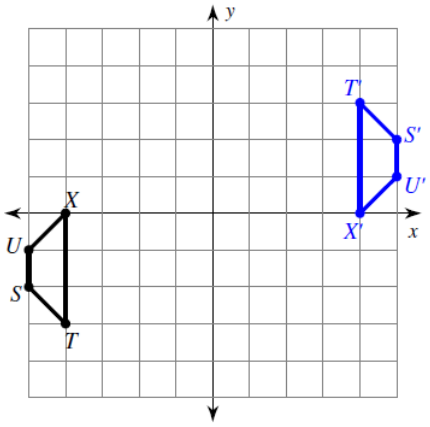
10) rotation 180° about the origin
$V(-5, -3)$, $A(-3, 1)$, $G(0, -3)$

Write a rule to describe each transformation.

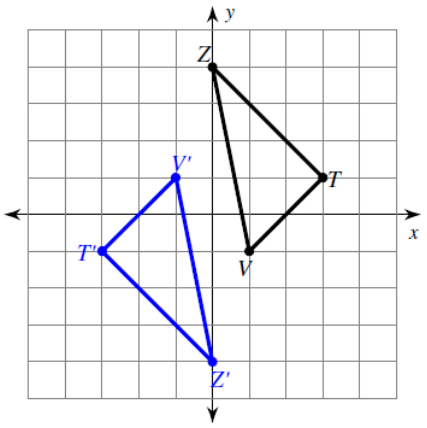
11)



12)



13)



14)