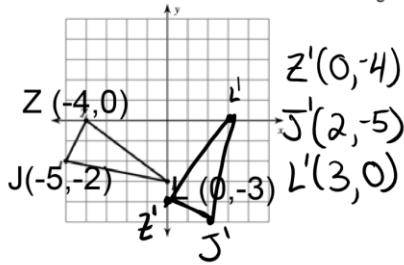


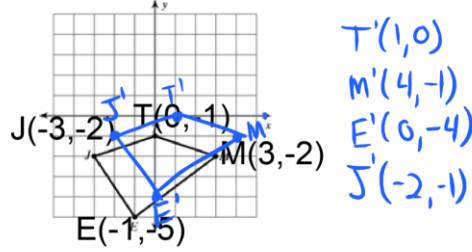
Warm Up

Identify the coordinates of the image after following transformations.

1. Rotation 90° counterclockwise about the origin.



3. Translation: 1 unit right and 1 unit up



Goals For Today

-Review Transformations

- Sequences of Transformations

- Coordinate Notation

This is a neat website that will allow you to practice transformations.

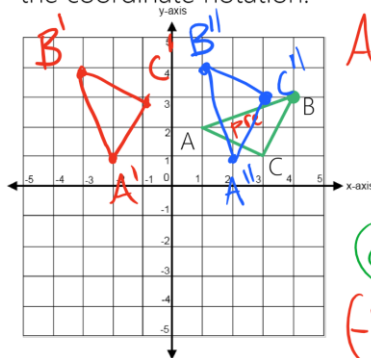
<http://www.shodor.org/interactivate/activities/TransmograpHerTwo/>

Sequence Of Transformations

Example

Transformation

Rotate the following figure 270 degrees clockwise about the origin, then translate it 4 spaces to the right. Write the coordinate notation.



$$A(1,2) \rightarrow A'(-2,1)$$

$$B(4,3) \rightarrow B'(-3,4)$$

$$(a,b) \rightarrow (-b,a)$$

$$(-b,a) \rightarrow (-b+4,a)$$

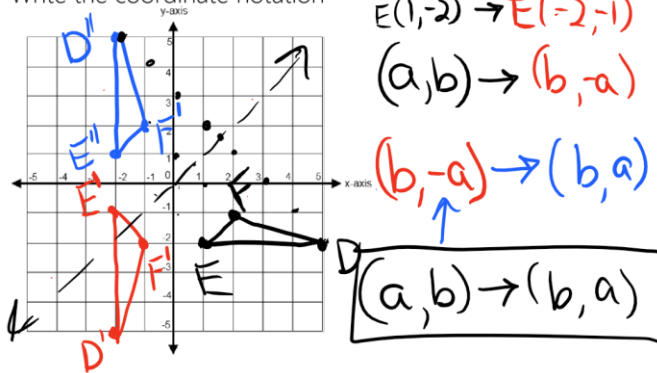
$$(a,b) \rightarrow (-b+4,a)$$

Example

Transformation

$\triangle DEF$ has vertices $D(5, -2)$, $E(1, -2)$, and $F(2, -1)$. Rotate $\triangle DEF$ 270° CCW about the origin and then reflect it across the x-axis.

Write the coordinate notation

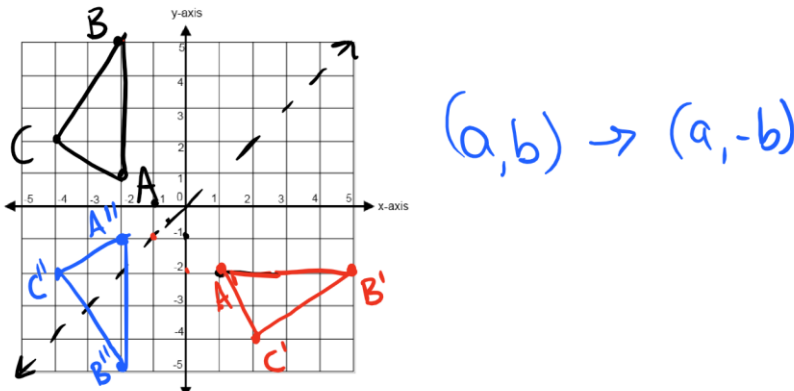


Sequence Of Transformations

Example

Transformation

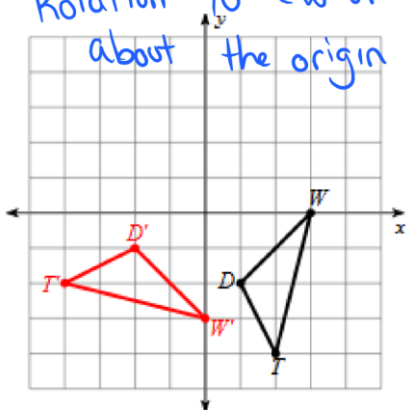
Reflect $\triangle ABC$ over $y=x$ then rotate it 90° clockwise about the origin. Write a generic coordinate for the final image. $A(-2, 1)$ $B(-2, 5)$ $C(-4, 2)$



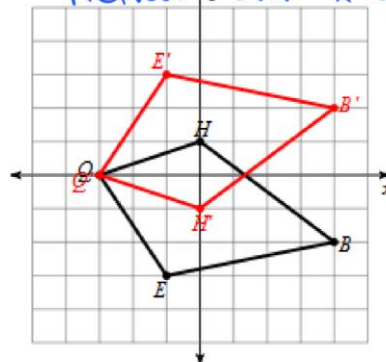
On the following slides, you will be shown a transformation. Identify a transformation that would take the pre-image to the image and the rule used to transform it.

Write your answer on the dry erase board and hold it up.

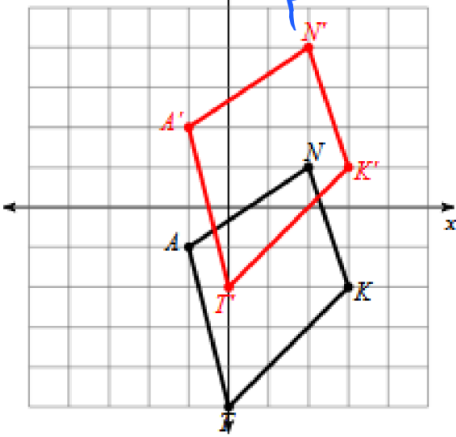
Rotation 90° CW or 270° CCW about the origin



Reflect over x-axis



Translate up 3

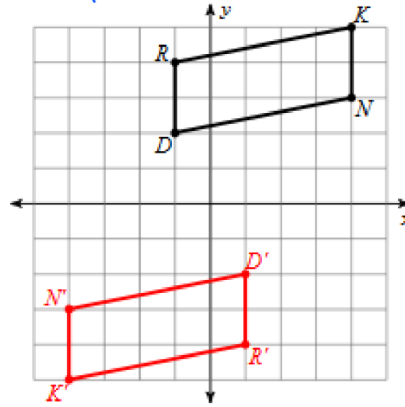


What is the generic coordinate for the transformation, given the following points.

$A(4, -1) \rightarrow A'(-1, 4)$

$(a, b) \rightarrow (b, a)$
Reflection over $y=x$

Rotate 180° about the origin



What is the generic coordinate for the transformation, given the following points.

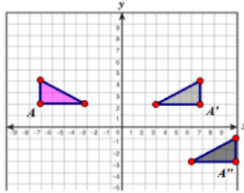
$B(1, 7) \rightarrow B'(3, 8) \rightarrow B''(-8, 3)$

$(a, b) \rightarrow (a+2, b+1) \rightarrow (-b-1, a+2)$
Translation of right 2 up 1 and a rotation of 90° ccw about the origin.

Sequence Of Transformations

Recap

Identify the transformations in the following sequence.



Reflection over the y -axis and a translation right 3 and down 5.

Write the generic coordinate for sequence of transformations.

$(a, b) \rightarrow (-a, b) \rightarrow (-a+3, b-5)$

$(a, b) \rightarrow (-a+3, b-5)$

