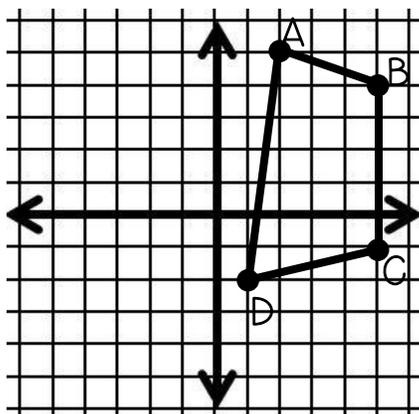


TRANSFORMATIONS

on the
COORDINATE PLANE

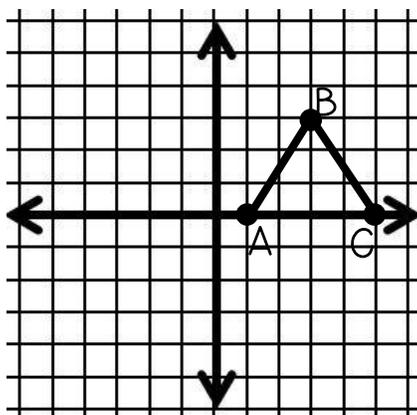
Example 1:

Graph the translation of quadrilateral ABCD 5 units left and 3 units down.
Write the coordinates of the original and new figure.



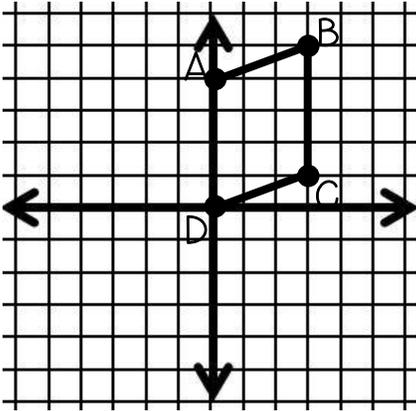
Example 6:

Triangle ABC has vertices A(1,0), B(3,3), C(5,0). Rotate this triangle 180 degrees about the origin. Write the coordinates of original and the new figure.



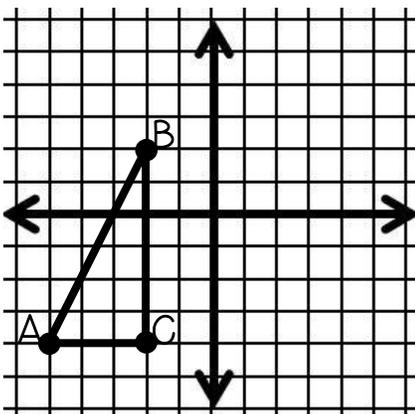
Example 5:

Rotate the graph of quadrilateral ABCD 90° clockwise about the origin. Write the coordinates of the original and new figure.



Example 2:

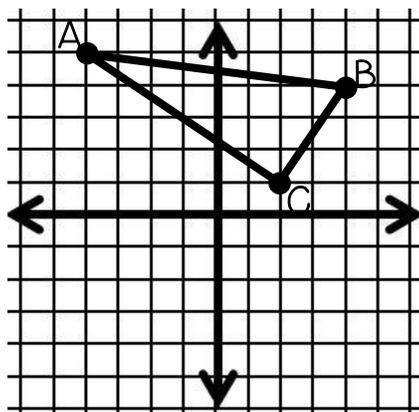
Translate the figure 6 units right and 2 units up. Write the coordinates of the original and translated figure.



TRANSLATION (slide)

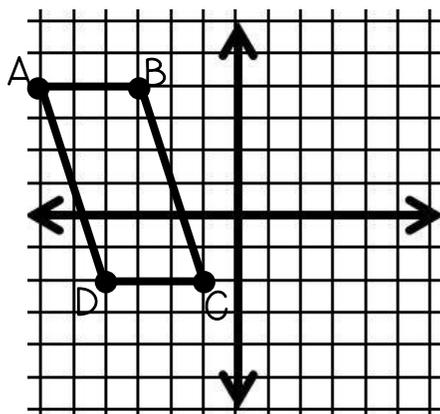
Example 3:

Graph the reflection of the figure across the x-axis. Write the coordinates of the original and new figure.



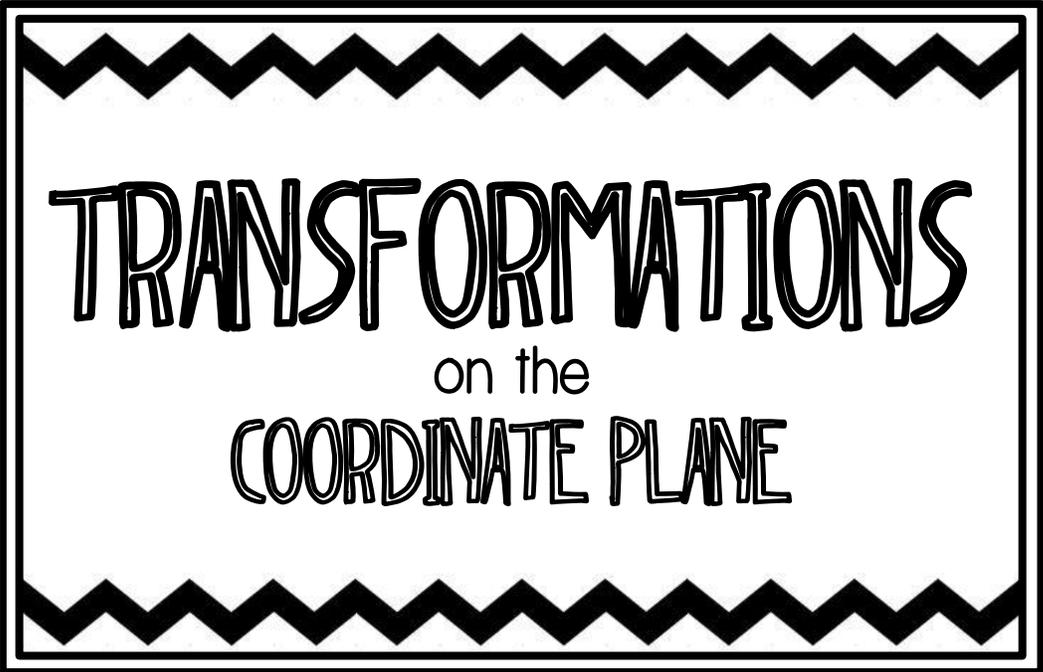
Example 4:

Graph the reflection of the figure over the y-axis. Write the coordinates of the original and new figure.



REFLECTION (flip)

Answer Key!

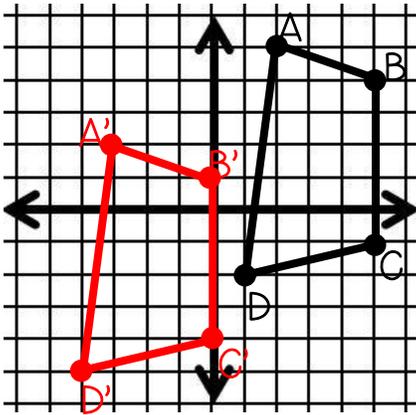


TRANSFORMATIONS

on the
COORDINATE PLANE

Example 1:

Graph the translation of quadrilateral ABCD 5 units left and 3 units down. Write the coordinates of the original and new figure.

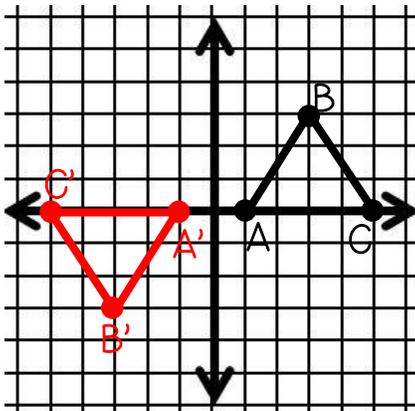


A (2,5)	A' (-3,2)
B (5,4)	B' (0,1)
C (5,-1)	C' (0, -4)
D (1,-2)	D' (-4,-5)

*Subtract 5 from each x- coordinate and subtract 3 from each y-coordinate.

Example 6:

Triangle ABC has vertices A(1,0), B(3,3), C(5,0). Rotate this triangle 180 degrees about the origin. Write the coordinates of the original and new figure.



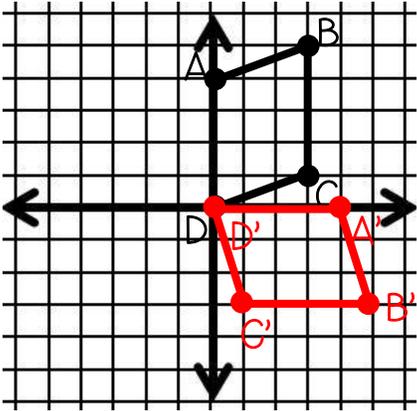
A (1,0)	A' (-1,0)
B (3,3)	B' (-3,-3)
C (5,0)	C' (-5,0)

*Switch the sign of the x- and y-coordinates (multiply the x- and y-coordinates by -1).

ROTATION (90° & 180°)

Example 5:

Rotate the graph of quadrilateral ABCD 90° clockwise about the origin. Write the coordinates of the original and new figure.

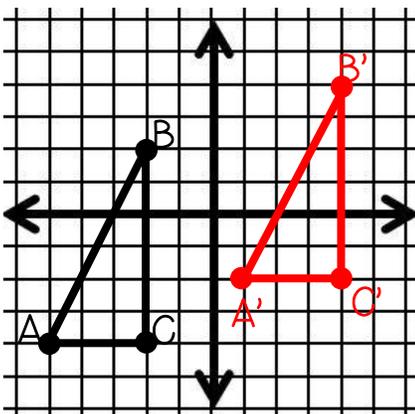


A (0, 4)	A' (4, 0)
B (3, 5)	B' (5, -3)
C (3, 1)	C' (1, -3)
D (0, 0)	D' (0, 0)

*Switch the x- and y-coordinates. Then, multiply the y-coordinate by -1

Example 2:

Translate the figure 6 units right and 2 units up. Write the coordinates of the original and translated figure.



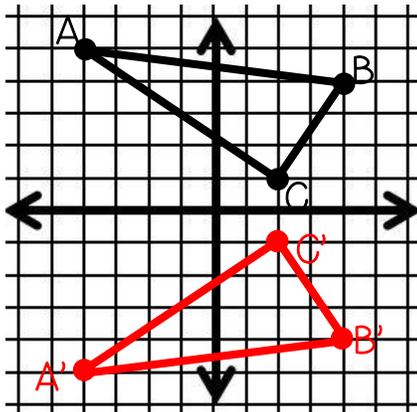
A (-5,-4)	A' (1, 2)
B (-2, 2)	B' (4,4)
C (-2,-4)	C' (4,-2)

*Add 6 to each of the x- coordinates and add 2 to each of the y-coordinates

TRANSLATION (slide)

Example 3:

Graph the reflection of the figure across the x-axis. Write the coordinates of the original and new figure.

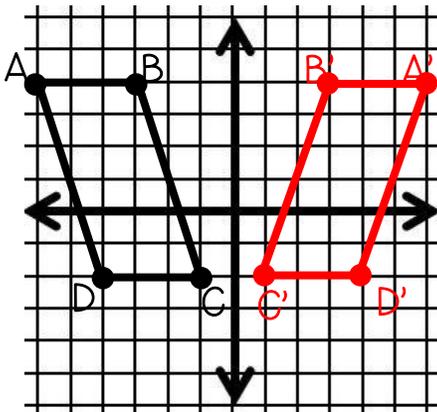


A (-4,5)	A' (-4,-5)
B (4,4)	B' (4,-4)
C (2,1)	C' (2,-1)

*When reflecting a figure over the x-axis, switch the sign of the y-coordinate (multiply the y-coordinate by -1).

Example 4:

Graph the reflection of the figure over the y-axis. Write the coordinates of the original and new figure.



A (-6,4)	A' (6,4)
B (-3,4)	B' (3,4)
C (-1,-2)	C' (1,-2)
D (-4,-2)	D' (4,-2)

*When reflecting a figure over the y-axis, switch the sign of the x-coordinate (multiply the x-coordinate by -1).

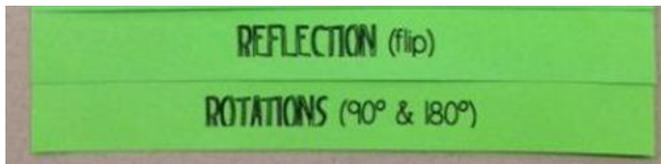
REFLECTION (flip)

Directions

Step 1: Print pages 1&2, and 3&4 front to back. I use the option on my printer of double sided and to flip along the short edge.

Step 2: Cut along the dotted line to cut off the extra piece on the right side of the paper. If you photocopied this correctly, there should not be any problems in this area on the back side either.

Step 3: Line up the two pieces as shown:



Step 4: Fold over the top portion and secure with a few staples. The final product should look like this:

