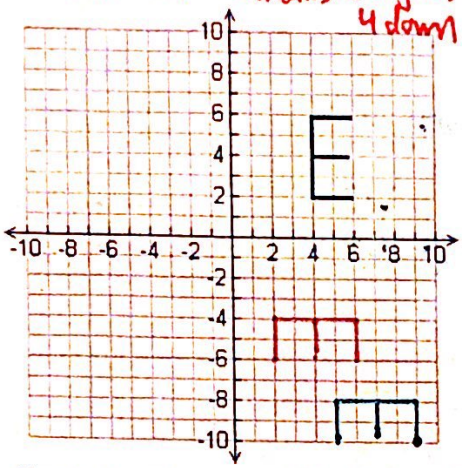
Name: KEY

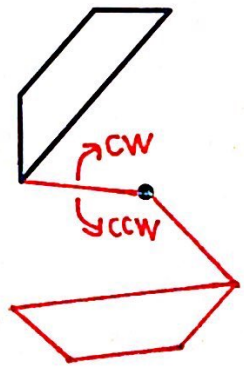
Transformations – Review Worksheet

1) Use patty paper to rotate the figure 270° counterclockwise, then translate it by (x + 3, y – 4). (Reuse the patty paper for 1, 2, and 3)

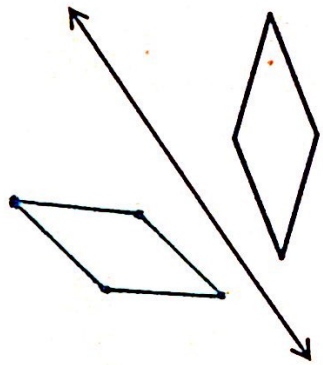
means 3 right, 4 down



2) Use patty paper & a protractor to rotate the figure 140° counterclockwise around the given point.



3) Use patty paper to reflect the figure across the line.

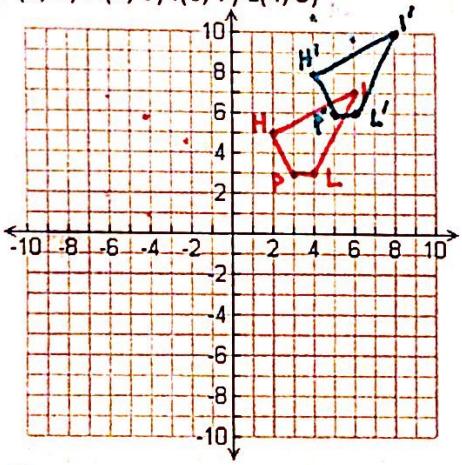


No more patty paper! Label the vertices of your preimage AND your image. All rotations are around the origin.

GREEN = FINAL IMAGE

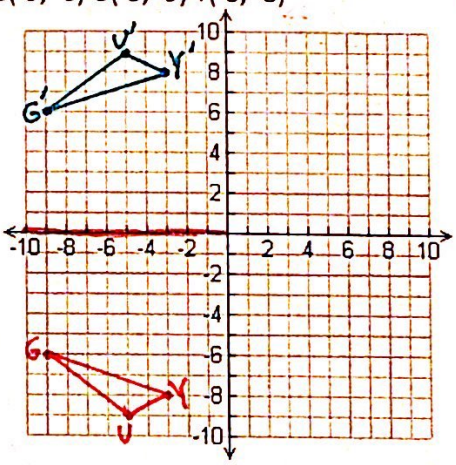
4) Translate 3 up, 2 right

P(3, 3) H(2, 5) I(6, 7) L(4, 3)



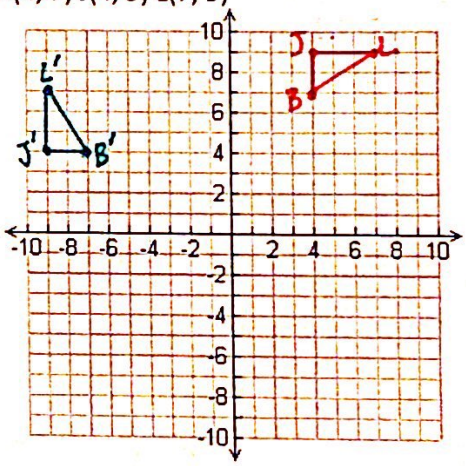
5) Reflect across x-axis

G(-9, -6) U(-5, -9) Y(-3, -8)



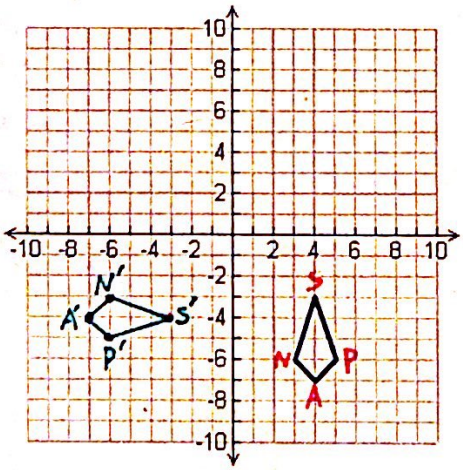
6 Rotate 90° counterclockwise

B(4, 7) J(4, 9) L(7, 9)



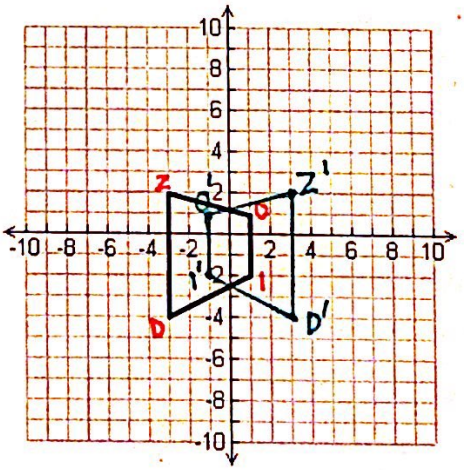
7) Rotate 270° counterclockwise

S(4, -3) N(3, -6) A(4, -7) P(5, -6)



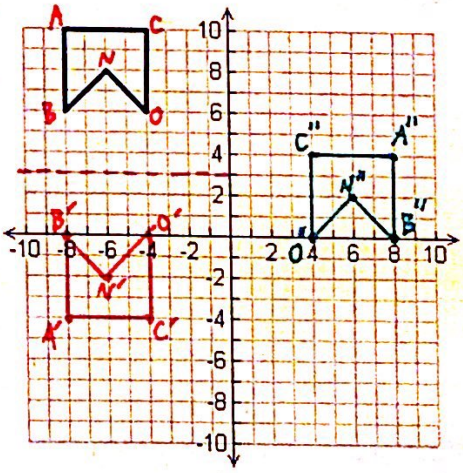
8) Reflect across y-axis

Z(-3, 2) O(1, 1) I(1, -2) D(-3, -4)

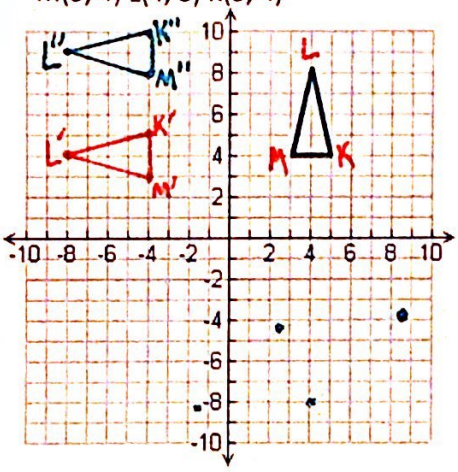


9) Reflect across y = 3, then rotate 180°

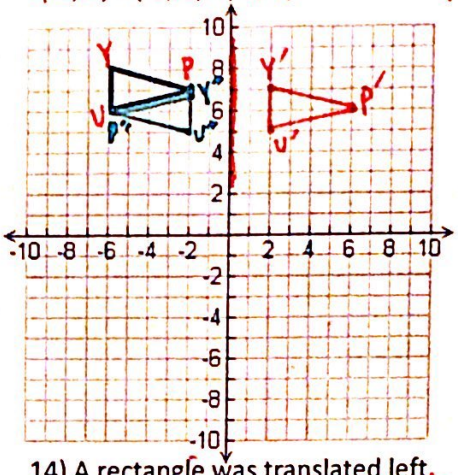
B(-8, 6) A(-8, 10) C(-4, 10) O(-4, 6) N(-6, 8)



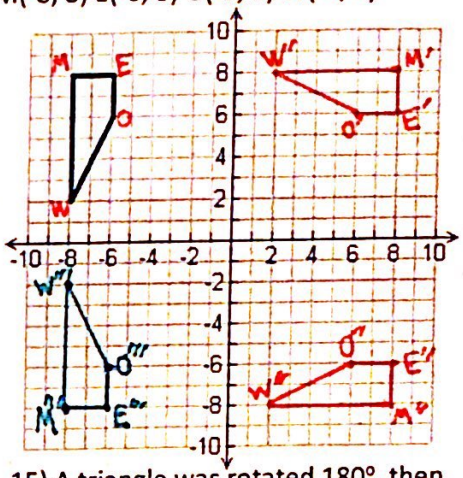
10) Rotate 270° clockwise, then translate by (x, y + 5) → up 5
M(3, 4) L(4, 8) K(5, 4)



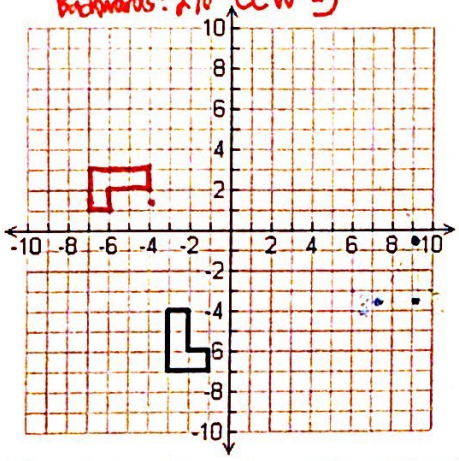
11) Translate by (x + 8, y – 1) right 8, down 1 then reflect across the y-axis
Y(-6, 8) U(-6, 6) P(-2, 7)



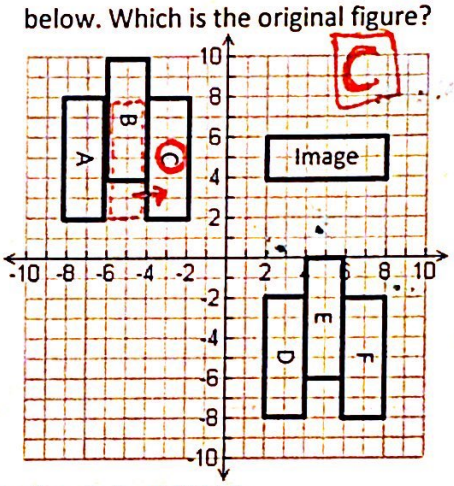
12) Rotate 90° clockwise, then reflect across the x-axis, then rotate 90° clockwise
M(-8, 8) E(-6, 8) O(-6, 6) W(-8, 2)



13) An "L" was rotated 270° clockwise, and **the image** is shown below. Draw the original figure.
Backwards: 270° CCW

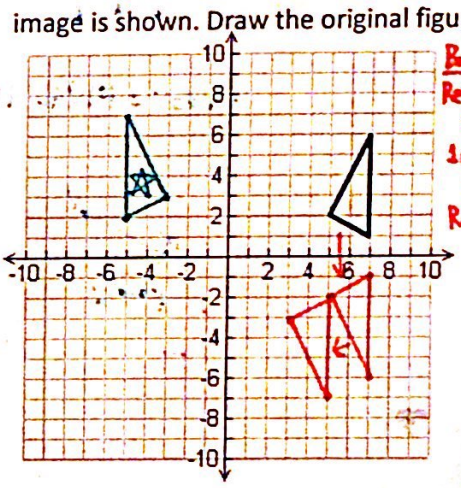


14) A rectangle was translated left two units, then rotated 90° clockwise. The image is shown below. Which is the original figure?
Backwards 90° CCW, right 2



C

15) A triangle was rotated 180°, then translated two units right and one unit up, then reflected across the x-axis. The image is shown. Draw the original figure.

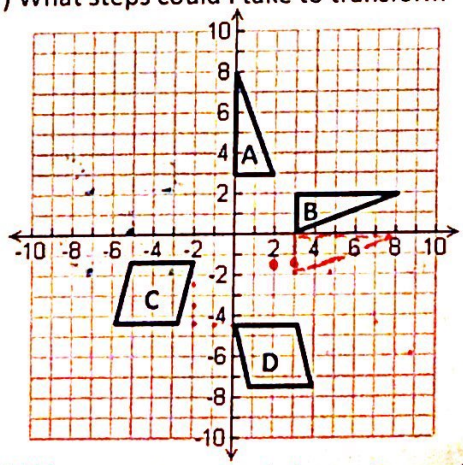


Backwards
Reflect across x-axis, 1 down + 2 left, Rotate 180°

16) Triangle **A** was transformed into triangle **B**. (See below) Which sequence of transformations was used?

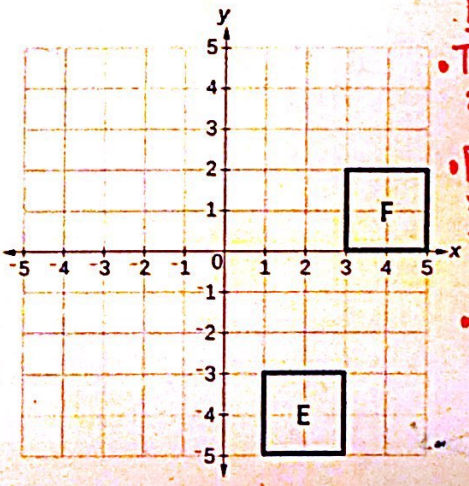
A. 90° clockwise rotation, then reflect across x-axis
B. 90° clockwise rotation, then translate 2 units up
C. 90° counterclockwise rotation, then reflect across the y-axis

17) What steps could I take to transform "C" onto "D"?



- Translate 2 right + 3 down, then reflect across y-axis
  or
- Reflect across y-axis, then translate 2 left + 3 down
  or
- Reflect across x=-1, then translate 3 down

18) Identify at least three different methods you could use to transform square "E" onto square "F".



Examples
- Translate 2 right + 5 up
- Reflect across x-axis, then translate 2 right + 3 down
- Rotate 90° ccw, then translate 1 down

****Now go to my website and use a different color to check your answers! This is part of the worksheet grade!****