Given ΔABC has vertices at A(5,0), B(2, -5), C(0,3)

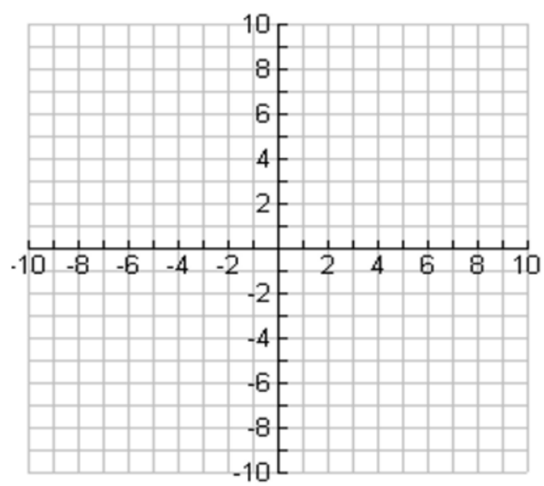
a. Find the vertices of the image of ΔABC under $\boxed{r_{(90°,O)}}$ $(x,y)\rightarrow(-y,x)$

A'(0 , 5) B'(5 ,2) C'(-3 ; 0)

b. Find the image of the point B under a $\boxed{R_{y=x}}$ $(x,y)\rightarrow(y,x)$

(-5,2)

c. Find the coordinates of the image of ΔABC under the transformation defined by $\boxed{T_{(-4,3)}}$ Left 4 up 3



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

Given $\boxed{\Delta BAD}$ with B(-4,3), A(1,5), and D(-1,-4) use the following transformation $\boxed{(R_{y=-2} \circ R_{x-axis})}$

$\lfloor 1^{st}$

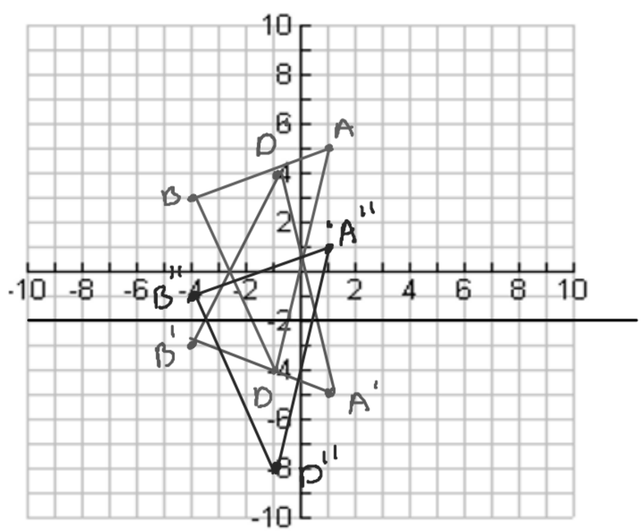
$(x,y) \to (x,-y)$

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

$y=-2$

B''(-4 , -1) A''(1 , 1) D''(-1 , -8)

$(x,y) \to (x, 2k-y)$

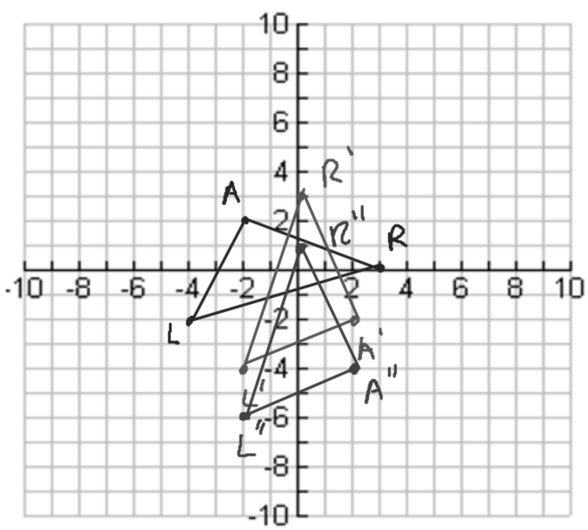


Given $\boxed{\Delta LAR}$ L(-4,-2), A(-2,2), and

R(3,0) $\boxed{(T_{(0,-2)} \circ R_{y=x})}$ $\longrightarrow$ $(x,y) \rightarrow (y,x)$

L'(-2 , -4) A'(2 , -2) R'(0 , 3)

L''(-2 , -6) A''(2 , -4) R''(0 , 1)

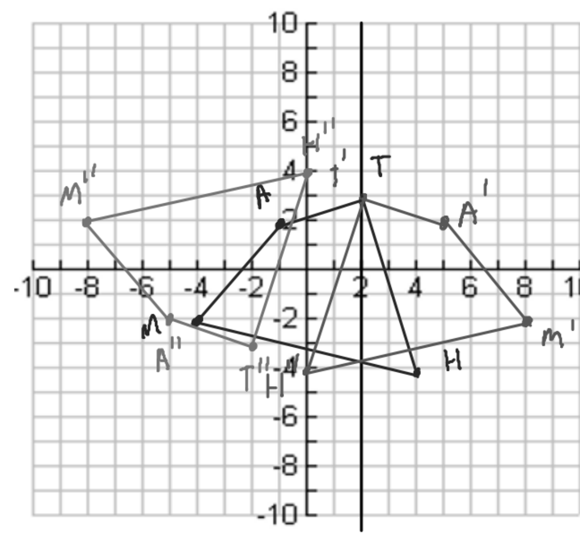


Given quadrilateral MATH with M(-4, -2), A(-1, 2), T(2,3), and H(4, -4), $\boxed{(r_{(180,O)} \circ R_{x=2})}$

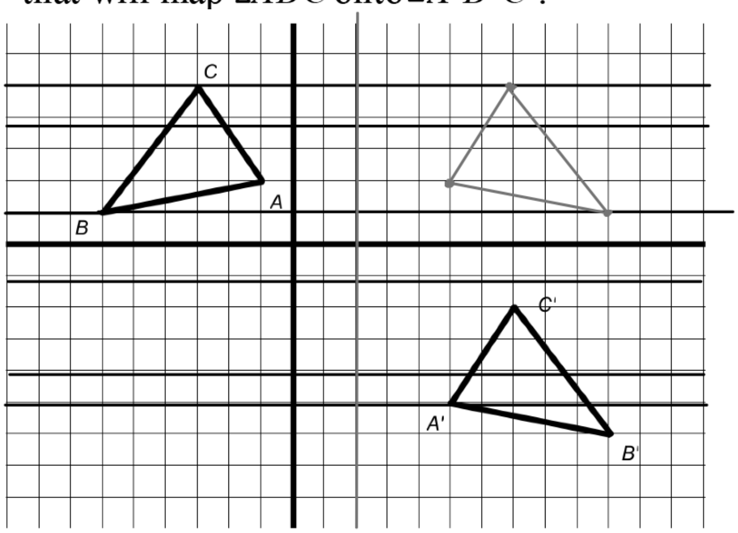
M'(8 , -2) A'(5 , 2) T'(2 , 3)
H'(0 , -4)

$(x, y) \rightarrow (-x, -y)$

M''(-8 , 2) A''(-5 , -2) T''(-2 , -3)
H''(0 , 4)



Describe and write a rule for a composite transformation that will map ΔABC onto $\Delta A'B'C'$.



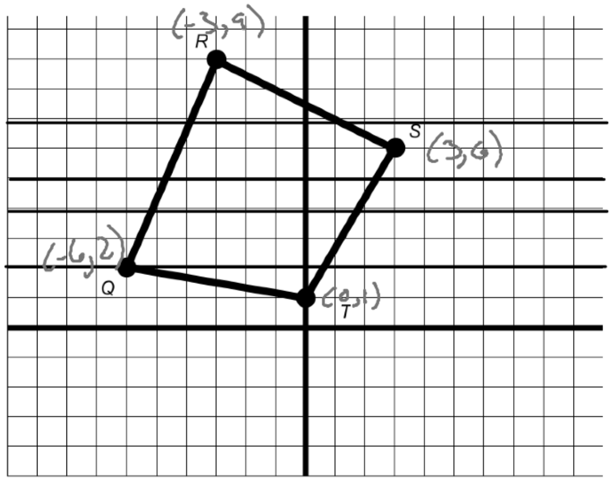
Reflection $x = 2$

Translation down 7

$\left(T_{\langle 0,-7\rangle} \circ R_{x=2}\right)$

$\left(R_{x=2} \circ T_{\langle 0,-7\rangle}\right)$

Find the coordiantes of the vertices for each image



a. $R_{y=-x}(QRST)$

$R_{y=-x}$

$(x,y) \to (-y,-x)$

Q' (-2,6)

R' (-9,3)

S' (-6,-3)

T' (-1,0)

$(x,y) \to (y,-x)$

b. $r_{(270°,O)}(QRST)$

Q' (2,6)

R' (9,3)

S' (6,-3)

T' (1,0)

c. $T_{\langle -5,-8 \rangle}(QRST)$

Q' (-11,-6)

R' (-8,1)

S' (-2,-2)

T' (-5,-7)

$(x,y) \to (-x,y)$

d. $(R_{y-axix} \circ T_{\langle 4,0 \rangle})(QRST)$

(-2,2) Q' (2,2)

(1,9) R' (-1,9)

(7,6) S' (-7,6)

(4,1) T' (-4,1)

A reflection over x = 5 followed by a reflection over x = -8 result in a translation in the direction of

UP DOWN LEFT RIGHT a total distacne 26

x=-8 x=5

A reflection over x = 6 followed by a reflection over x = -4 result in a translation in the direction of

UP DOWN LEFT RIGHT a total distacne of 20

x=-4 x=6

If you wanted to translate a shape to the up 6 units, you could reflect over y = -1 and then y = 2.

y=-1

If you want to translate a shape right 18 units, you could reflect over x = -3 and then x = 6.

x=-3

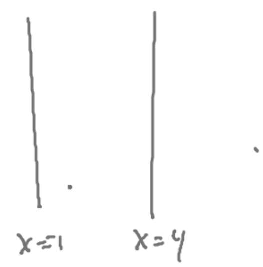
If you want to translate a shape down 14 units, you could reflect over y= 11 and then y = 4.

y=4

Suppose m is the line x = 4 and n is the line x = -1. Write the following composition as one translation $R_m \circ R_n$.

$R_m \circ R_n = T_{\langle \quad \rangle}$

$T_{\langle 10,0 \rangle}$

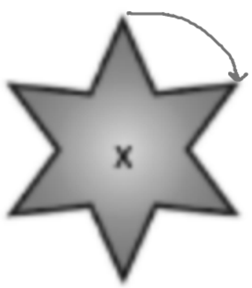


Find a translation that has the same effect as the composition of translations below.

$T_{\langle 6,-4 \rangle}(x,y)$ followed by $T_{\langle -3,5 \rangle}(x,y)$

The rule $T_{4,-5}$ is used for point (-3, 4). Where is the translated point in the coordinate system?

Identify any reflection or/and rotational symmetry. On either, draw the line(s) of symmetry and describe the angle(s) of rotation.



$\frac{360}{6} = 60^\circ$

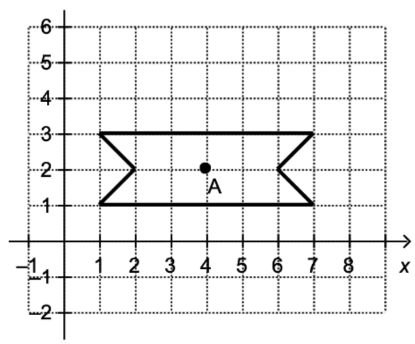
120°

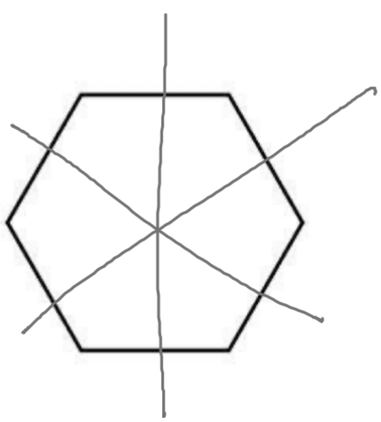
180°

240°

300°

360°





Give the coordinates of the image of the point (6, -3) under the given transformation.

Transformation	New Coordinates
$r_{(90°,O)}$	(3,6)
$R_{y=axis}$	(-3,6)
$(R_{y=3} \circ R_{y=-2})$ $T\langle 10,0\rangle$ What single rule would work as well?	(7,6)
$(r_{(90°,O)} \circ r_{(180°,O)})$	(6,-7)
$T_{(-4.-2)}$	(2,-9)
$(R_{y=3}) \circ T_{(3,-1)}$	(2,16)

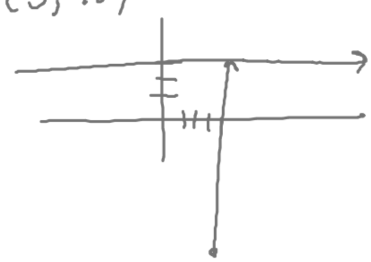
$(x,y) \to (-y,x)$

$(x,y) \to (-x,y)$

$r_{(180°)}$ $(x,y) \to (-x,-y) = (-7,-6)$

$r_{(90}$ $(x,y) \to (-y,x) = (6,-7)$

(5,-10)



A.I.O.H.

Alt. Int

C.A.I.A.T