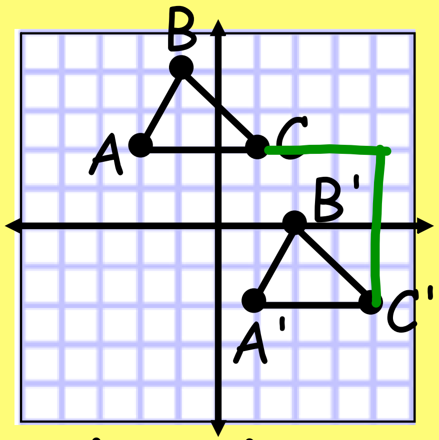
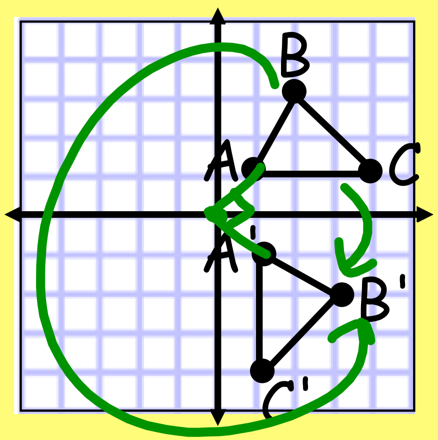
2/26/20 - Warm Up Problem

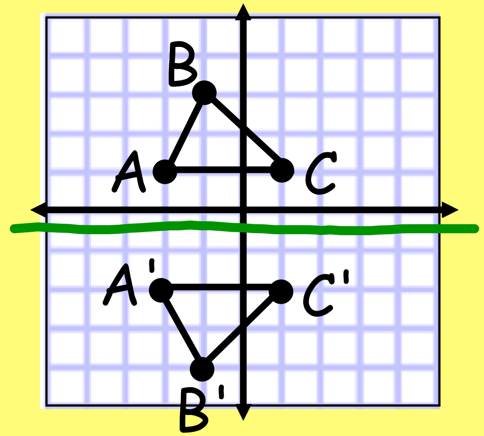
Write a transformation in function notation to describe each graph.



$T(3,-4)$



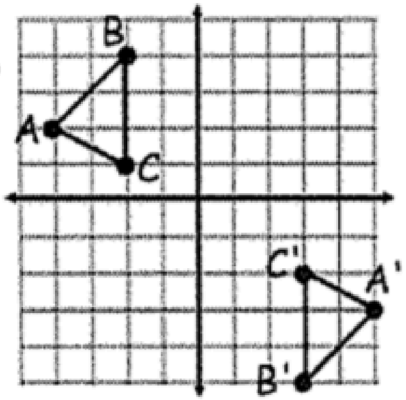
$r(270°, O)$



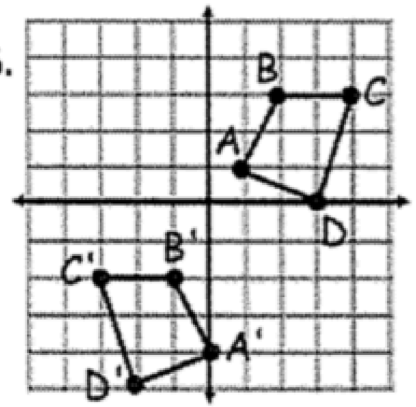
$R_{y=-\frac{1}{2}}(\triangle ABC)$

Write a composition of transformations in function notation that maps each preimage onto its image.

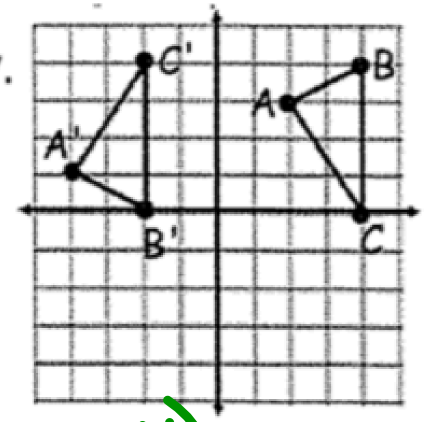
35.



36.



37.

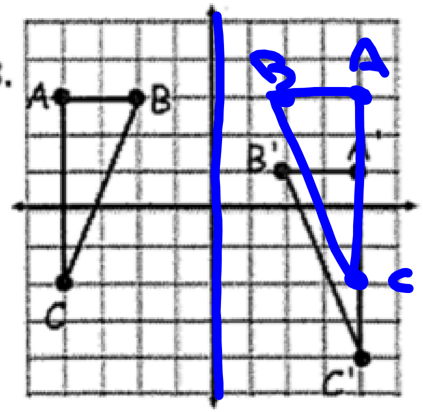


$(x,y)=(-y,x)$

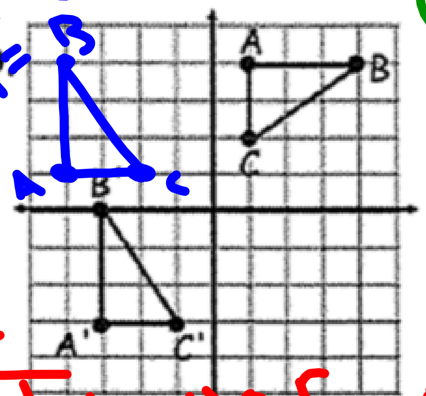
$(1,2)=(-2,1)$

$(x,y)=(-x,-y)$

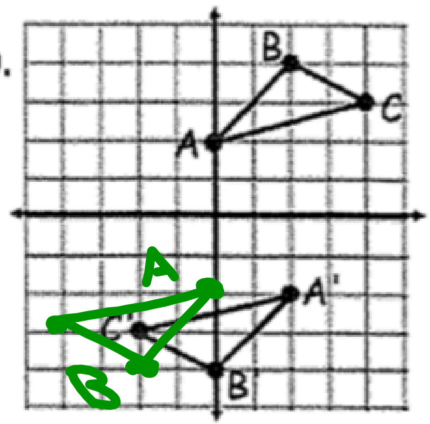
38.



39.



40.



$(T_{\langle 0,-2\rangle} \circ R_{y\text{-axis}})(\Delta ABC)$

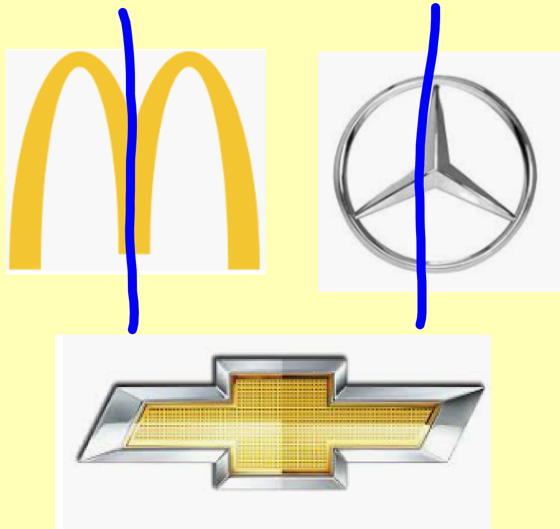
$(T_{\langle 1,-4\rangle} \circ r_{(90°,0)})$

$(T_{\langle 2,0\rangle} \circ r_{(180°,0)})$

Concept 21 - Symmetry

Goals: determine if a figure shows reflectional or rotational symmetry - find lines of symmetry and angles of rotational symmetry

Symmetry: a rigid motion maps the figure onto itself

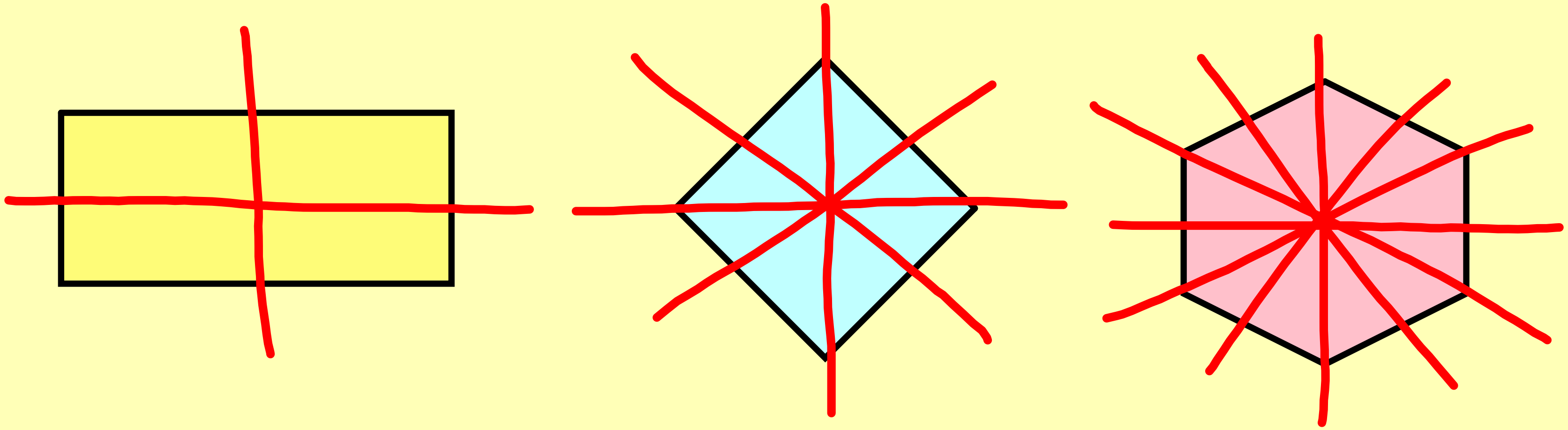


There are two kinds of symmetry:

- **reflectional symmetry**
- **rotational symmetry**

Reflectional Symmetry (line symmetry)

- One half of the figure is a mirror image of the other half
- A line of symmetry can be drawn through figure



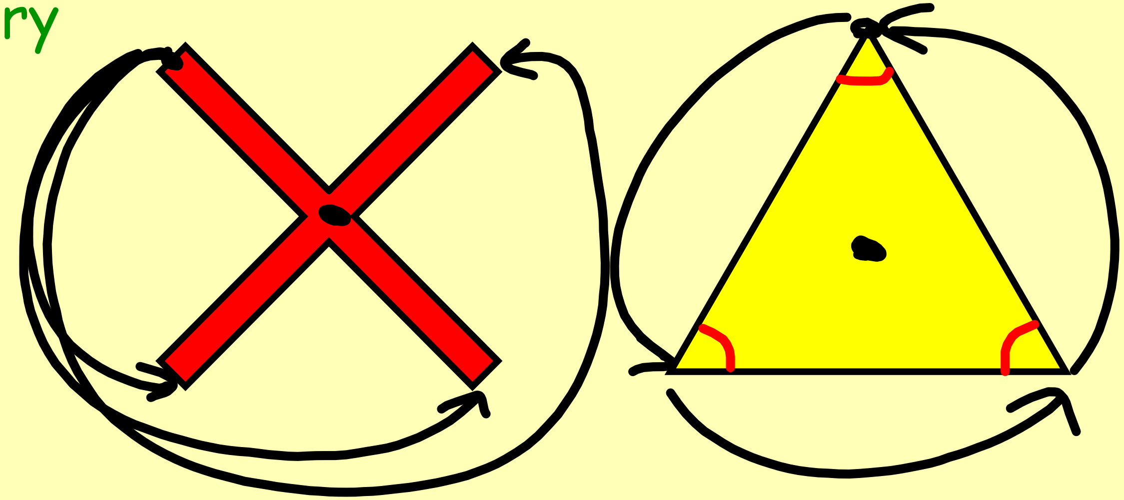
Rotational Symmetry

A figure has **rotational symmetry** if the figure looks the same after being rotated less than 360°

- a figure can have several different angles of rotational symmetry

$\frac{360}{4}$

$90°$



$\frac{360}{3}$

$120°$