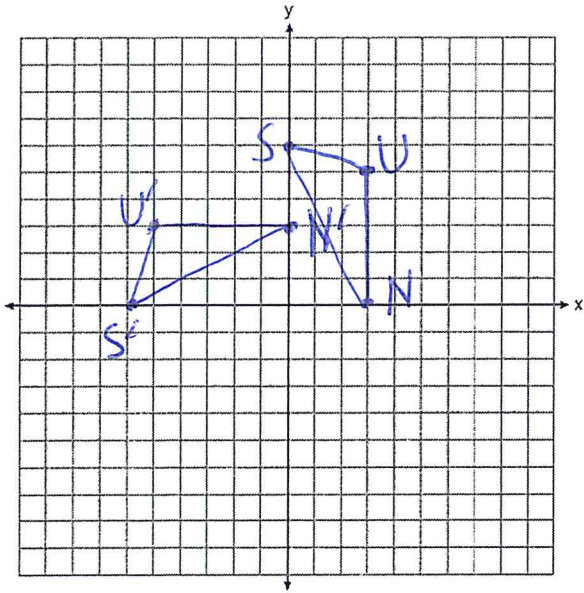


Name Schlansky  
 Mr. Schlansky

Date \_\_\_\_\_  
 Geometry

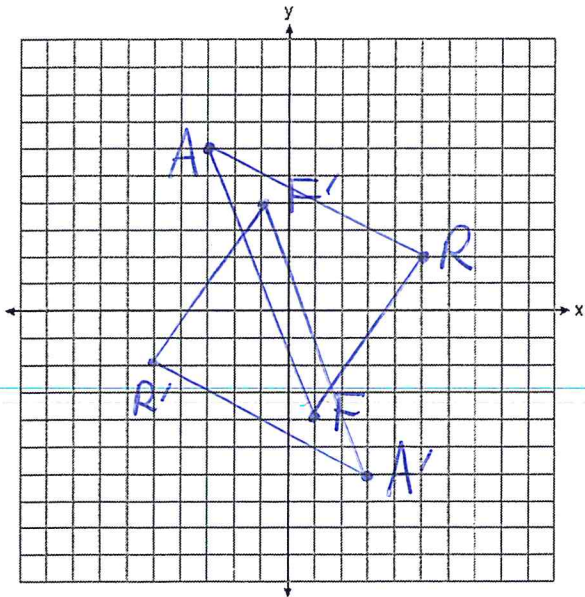
## Rotations

1. Triangle  $SUN$  has coordinates  $S(0,6)$ ,  $U(3,5)$ , and  $N(3,0)$ . On the accompanying grid, draw and label  $\triangle SUN$ . Then, graph and state the coordinates of  $\triangle S'U'N'$ , the image of  $\triangle SUN$  after a rotation of  $90^\circ$  centered at the origin.



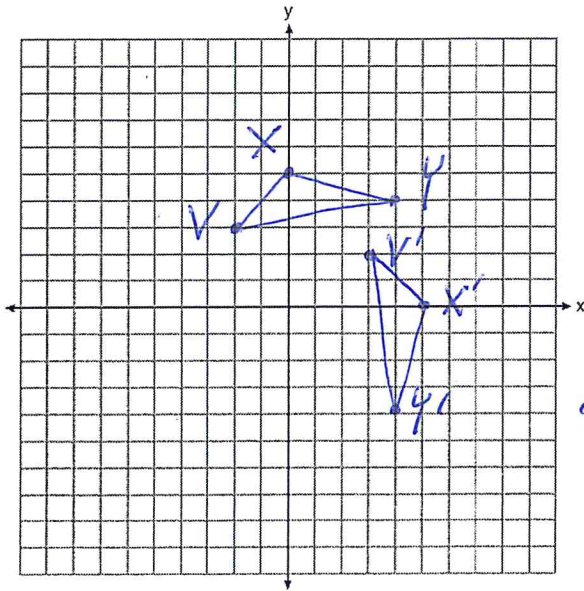
$S'(-6,0)$   
 $U'(-5,3)$   
 $N'(0,3)$

2. Triangle  $ARF$  has coordinates  $A(-3,6)$ ,  $R(5,2)$ , and  $F(1,-4)$ . On the accompanying grid, draw and label  $\triangle ARF$ . Then, graph and state the coordinates of  $\triangle A'R'F'$ , the image of  $\triangle ARF$  after a rotation of  $180^\circ$  centered at the origin.



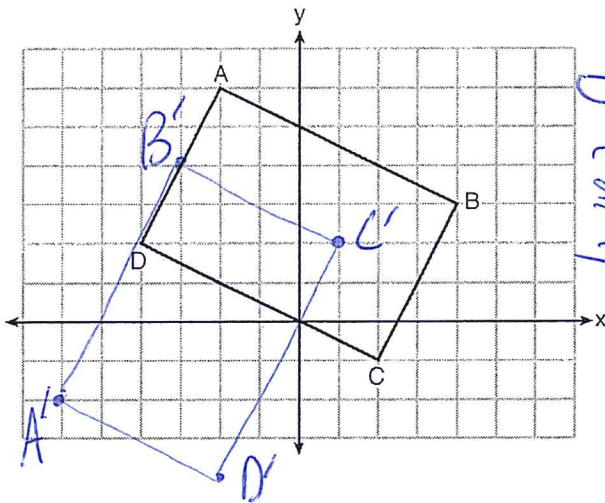
$A'(-3,-6)$   
 $R'(-5,-2)$   
 $F'(-1,4)$

3. On the accompanying set of axes, graph  $\triangle VXY$  if it is the image of  $V(-2,3)$ ,  $X(0,5)$ , and  $Y(4,4)$  after a rotation of  $270^\circ$  centered at the origin.



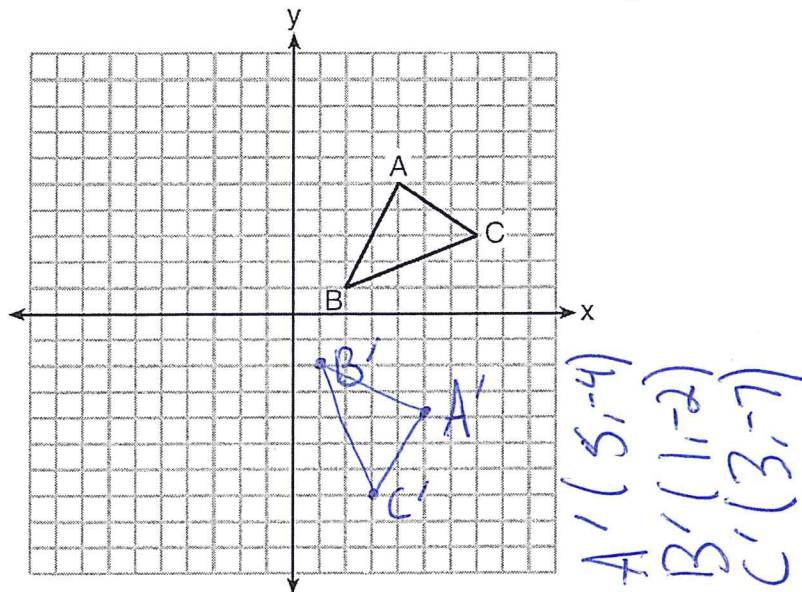
$V(-2, 3)$   
 $X(0, 5)$   
 $Y(4, 4)$

4. Quadrilateral  $ABCD$  is graphed on the set of axes below. State the coordinates of quadrilateral  $A'B'C'D'$ , the image of quadrilateral  $ABCD$  after a rotation of  $90^\circ$  centered at the origin.

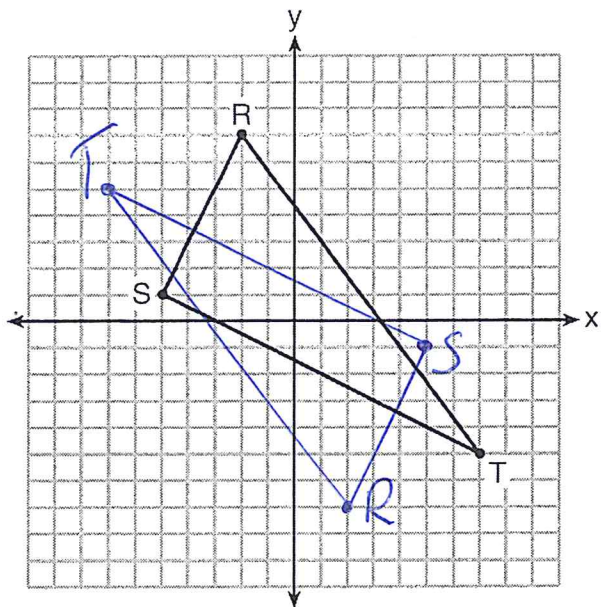


$A'(-2, -1)$   
 $B'(-1, -2)$   
 $C'(1, -2)$   
 $D'(2, -1)$

5. In the diagram below,  $\triangle ABC$  is graphed. Graph and state the coordinates of the image of  $\triangle ABC$  after a rotation of  $270^\circ$  centered at the origin and label it  $\triangle A'B'C'$ .



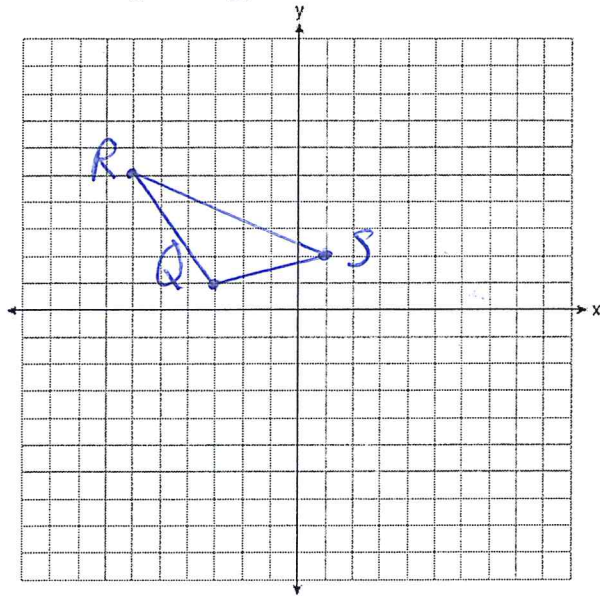
6. Triangle  $RST$  is graphed on the set of axes below. Graph the image of  $\triangle RST$  after a rotation of  $180^\circ$  centered at the origin and label it  $\triangle R'S'T'$ .



$R'(1, -3)$   
 $S'(-1, -1)$   
 $T'(2, 1)$

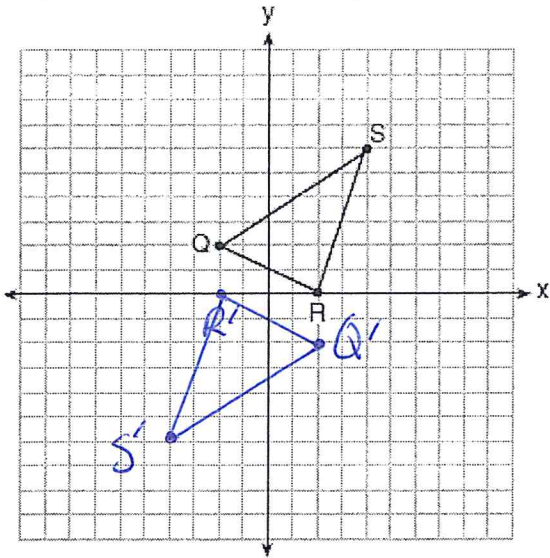


7. The coordinates of  $\triangle QRS$  are  $Q(-3,1)$ ,  $R(-6,5)$ , and  $S(1,2)$ . Graph and state the coordinates of the image of  $\triangle QRS$  after a rotation of  $90^\circ$  centered at the origin and label it  $\triangle Q'R'S'$ .



$Q'(-1, -3)$   
 $R'(-5, -6)$   
 $S'(-2, 1)$

8. Triangle  $QRS$  is graphed on the set of axes below. Graph and state the coordinates of  $\triangle Q'R'S'$ , the image of  $\triangle QRS$  after a rotation of  $180^\circ$  centered at the origin



$(-2, -2)$ ,  $Q'$   
 $(-1, -1)$ ,  $R'$   
 $(-3, -3)$ ,  $S'$