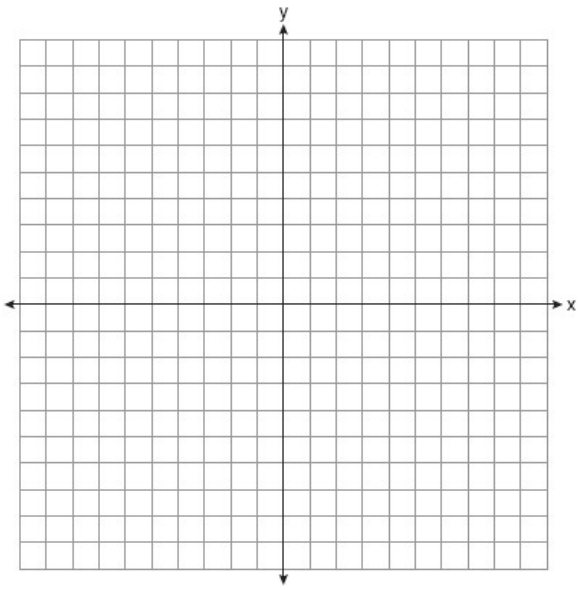
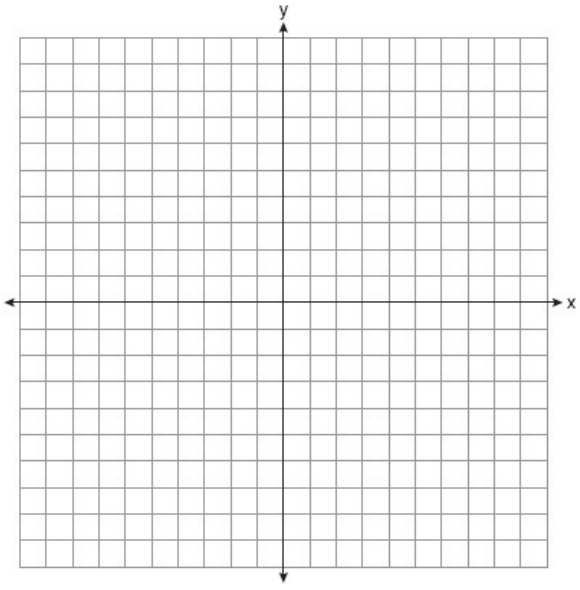
Name: _____ Date _____
Mr. Schlansky Geometry

Composition of Transformations

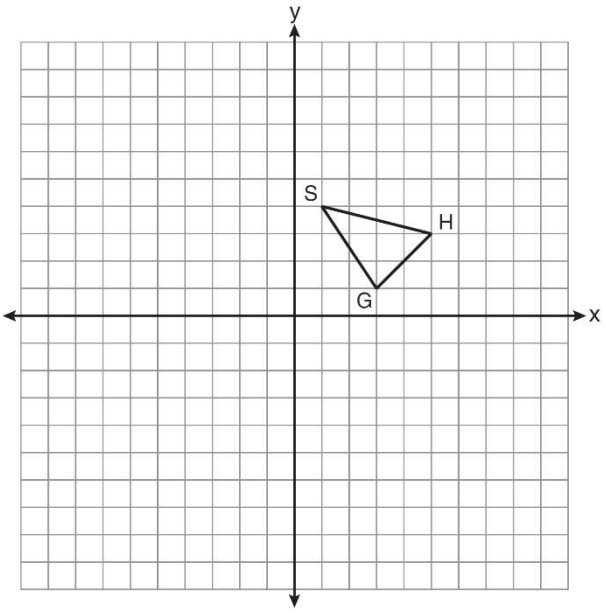
1. The coordinates of trapezoid *ABCD* are $A(-4,5)$, $B(1,5)$, $C(1,2)$, and $D(-6,2)$. Trapezoid $A''B''C''D''$ is the image after a rotation of 90 followed by a reflection in the x axis. State the coordinates of trapezoid $A''B''C''D''$.



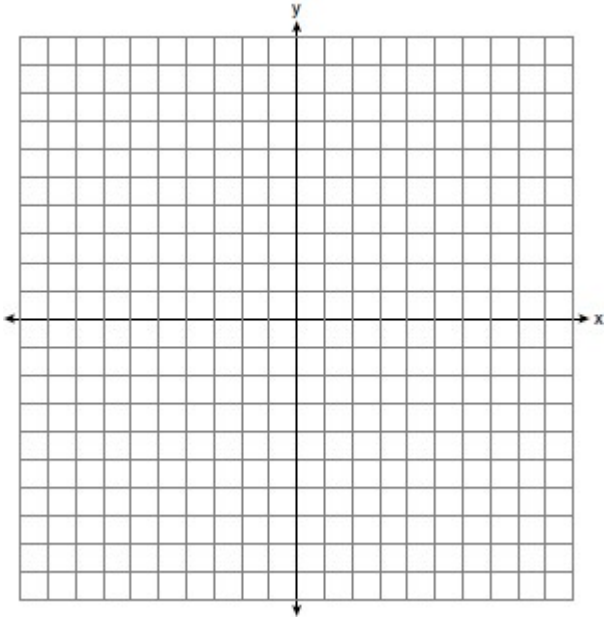
2. Triangle MKY has vertices M(6,-4), K(-4,-2), and Y(-2,6)
Graph the image of ΔMKY after a translation 3 units right and 2 units down followed by a rotation of 180 and label it $\Delta M'K'Y'$.



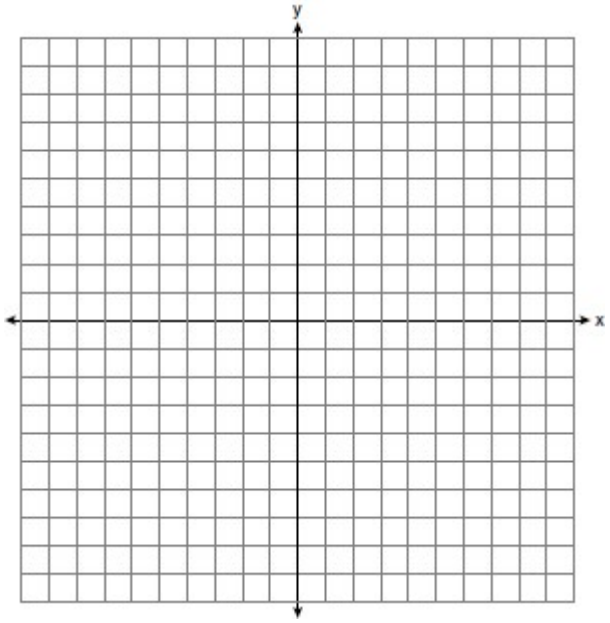
3. As shown on the set of axes below, $\triangle GHS$ has vertices $G(3,1)$, $H(5,3)$, and $S(1,4)$. Graph and state the coordinates of $\triangle G''H''S''$, the image of $\triangle GHS$ after a reflection over the line $x=-1$ followed by a reflection over the x axis.



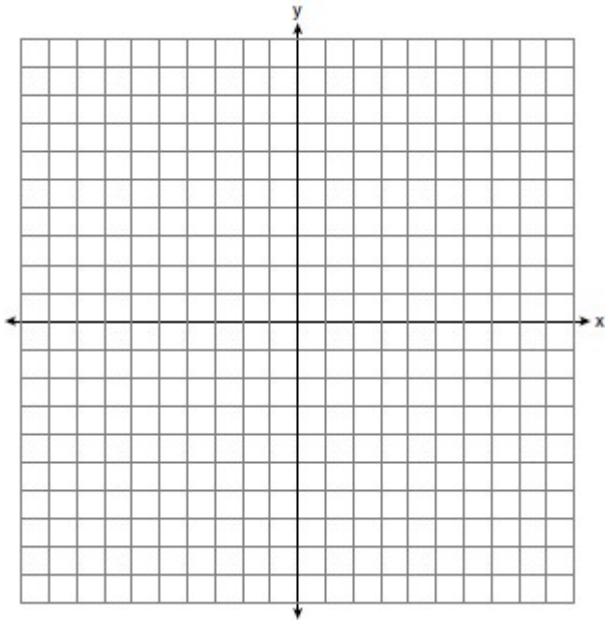
4. The coordinates of the vertices of quadrilateral ABCD are A(2,0), B(6,-4), C(10,0), and D(6,4). Graph and state the coordinates of quadrilateral A'B'C'D', the image of quadrilateral ABCD after reflection in the x axis followed by a rotation of 90.



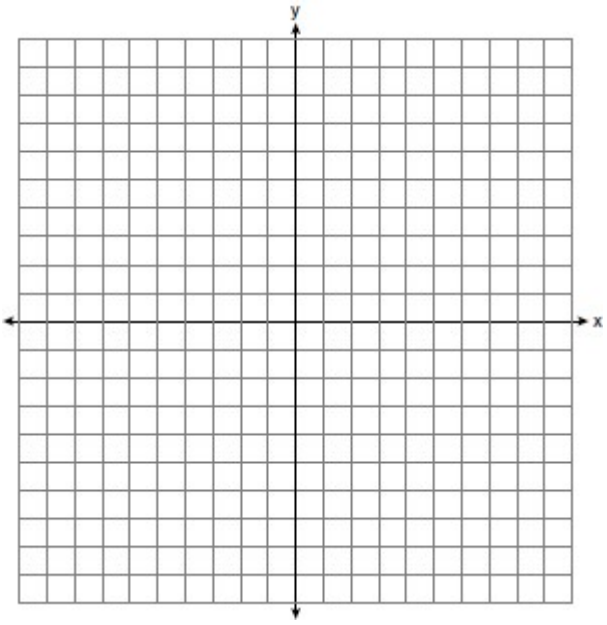
5. The coordinates of the vertices of quadrilateral METZ are M(-4,1), E(0,5), T(2,3), and Z(4,-4). Graph and state the coordinates of quadrilateral M'E'T'Z', the image of quadrilateral METZ after a rotation of 270 followed by a reflection over the line $y = 1$.



6. The coordinates of the vertices of parallelogram *ABCD* are $A(-2, 2)$, $B(3, 5)$, $C(4, 2)$, and $D(-1, -1)$. State the coordinates of the vertices of parallelogram $A''B''C''D''$ that result from a reflection over the line $y = x$ followed by a reflection in the y axis.



7. The coordinates of the vertices of $\triangle ABC$ $A(1, 3)$, $B(-2, 2)$ and $C(0, -2)$. On the grid below, graph and label $\triangle A''B''C''$, the result of a translation 4 to the right and one down followed by a rotation of 180. State the coordinates of A'', B'', and C''.



8. In the diagram below, $\triangle ABC$ has coordinates $A(1,1)$, $B(4,1)$, and $C(4,5)$. Graph and label $\triangle A''B''C''$, the image of $\triangle ABC$ after the translation five units to the right and two units up followed by the reflection over the line $y = 0$.