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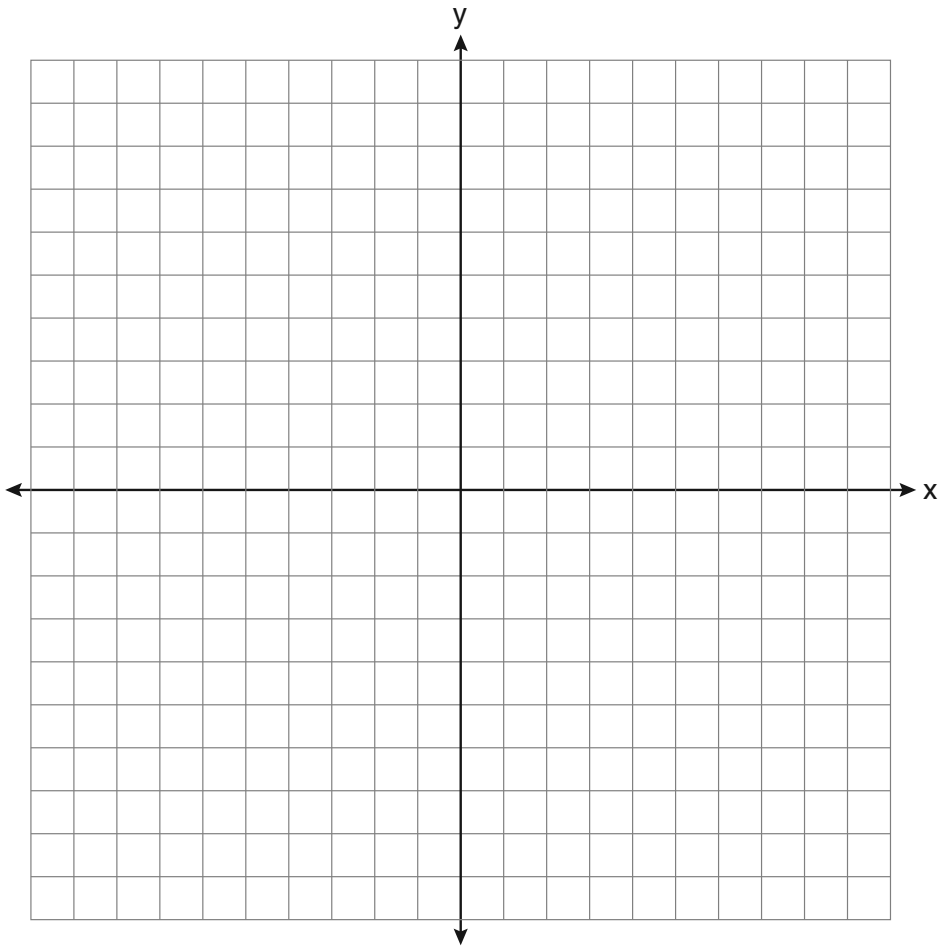
6 March 2019

Do Now: Rigid motions (Isometries)

1. Make both a table and a labeled graph

1. Triangle ABC has the vertices $A(1,2)$, $B(2,5)$, and $C(7,4)$. Find the coordinates of $\Delta A'B'C'$, the image of ΔABC under the transformation $T_{-2,-7}$

   Graph and label both triangles. What is the relationship of the lengths of the sides of the two triangles? Justify your answer.



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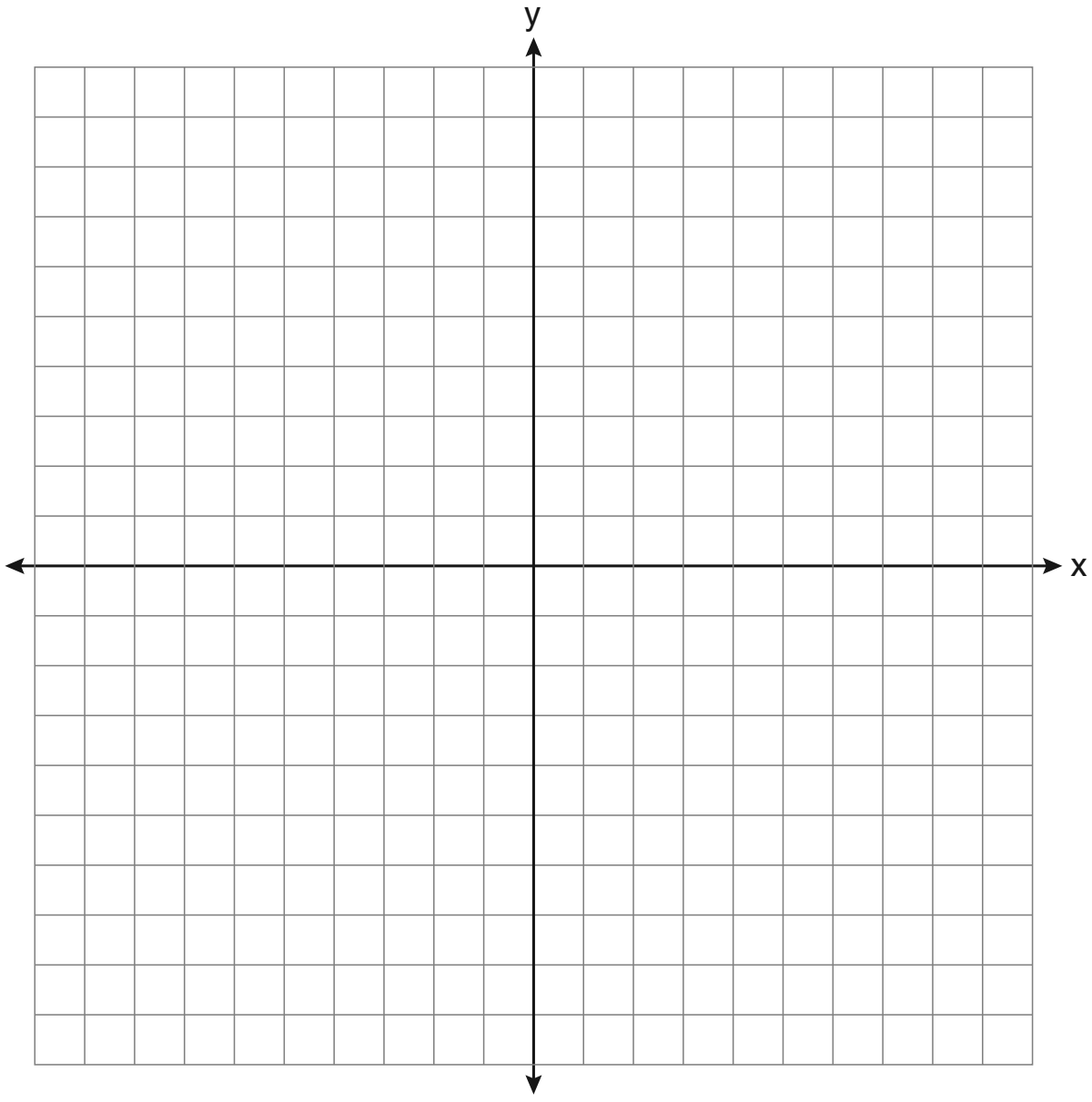
2. Quadrilateral *MATH* has the vertices $M(-2,-1)$, $A(1,3)$, $T(6,3)$, and $H(3,-1)$. Plot and label the image of quadrilateral *MATH* under the transformation $r_{\text{x-axis}}$

   State the coordinates of the image. Justify why distances are preserved by the reflection. What type of quadrilateral is *MATH*?



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30 Triangle ABC has vertices $A(-2,2)$, $B(-1,-3)$, and $C(4,0)$. Find the coordinates of the vertices of $\triangle A'B'C'$, the image of $\triangle ABC$ after the transformation $r_{x\text{-axis}}$.
[The use of the grid below is optional.]

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36 The coordinates of the vertices of $\triangle ABC$ are $A(1,3)$, $B(-2,2)$, and $C(0,-2)$. On the grid below, graph and label $\triangle A''B''C''$, the result of the composite transformation $D_2 \circ T_{3,-2}$. State the coordinates of A'', B'', and C''.