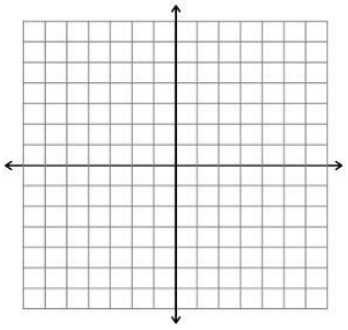
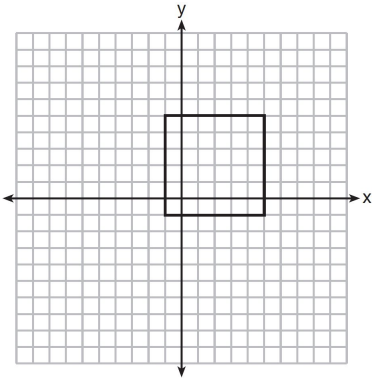
Unit 2 Pre-Test

G.CO.A.2 Given ΔABC with vertices $A(-1, 3)$, $B(1, 2)$, and $C(6, 1)$, determine the image, $\Delta A'B'C'$, under the transformation $(x, y) \rightarrow (2x, y + 1)$. Is this transformation an isometry? Justify your answer.



G.CO.A.3 In the diagram below, a square is graphed in the coordinate plane.



A reflection over which line does not carry the square onto itself?

1) $x = 5$

2) $y = 2$

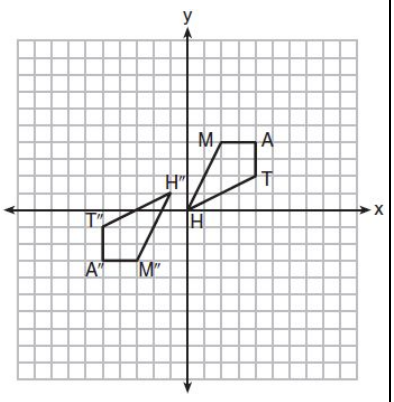
3) $y = x$

4) $x + y = 4$

Modelling Problems:

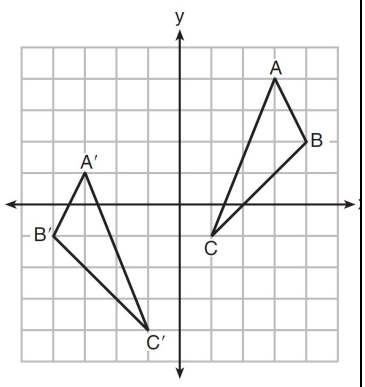
1. Describe a real-world example of how you can use a ***translation*** to show that two things are the same (congruent).
2. Describe a real-world example of how you can use a ***reflection*** to show that two things are the same (congruent).
3. Describe a real-world example of how you can use a ***rotation*** to show that two things are the same (congruent).
4. Describe a real-world example of why you ***can't*** use a ***dilation*** to show that two things are the same (congruent).

G.CO.A.5 Quadrilateral *MATH* and its image *M"A"T"H"* are graphed on the set of axes below.



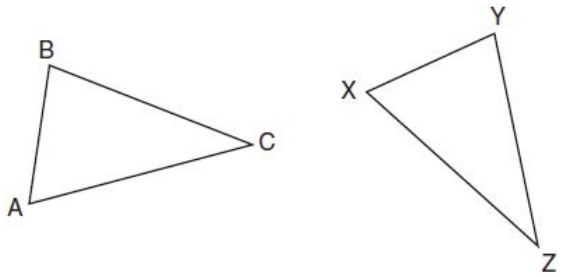
Describe a sequence of transformations that maps quadrilateral *MATH* onto quadrilateral *M"A"T"H"*.

G.CO.B.6 As graphed on the set of axes below, $\triangle A'B'C'$ is the image of $\triangle ABC$ after a sequence of transformations.



Is $\triangle A'B'C'$ congruent to $\triangle ABC$? Use the properties of rigid motion to explain your answer.

G.CO.B.7 In the diagram below of $\triangle ABC$ and $\triangle XYZ$, a sequence of rigid motions maps $\angle A$ onto $\angle X$, $\angle C$ onto $\angle Z$, and $\overline{AC}$ onto $\overline{XZ}$.



Determine and state whether $\overline{BC} \cong \overline{YZ}$. Explain why.