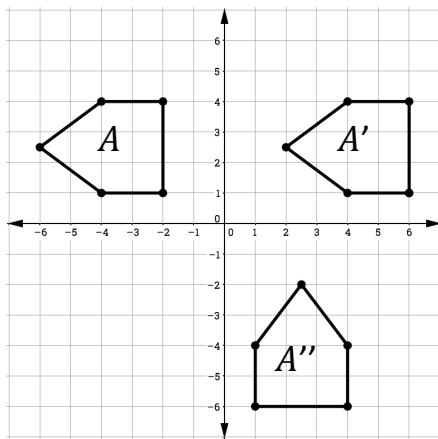


Introduction to Polygons – Part 2
Compositions of Transformations of Polygons – Part 1
Independent Practice

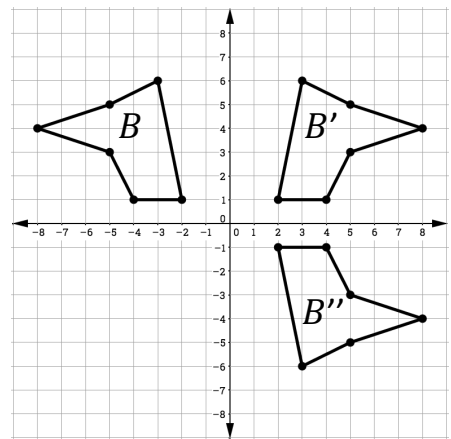
- How is the movement of a basketball during a game a real life example of a Composition of Transformations?
- Next to each composition of transformations, write the letter for the corresponding graph from the options below.

	Glide Reflection		Composition of isometries (translation, then rotation)
	Double Reflection		Composition of isometries (translation, then reflection)

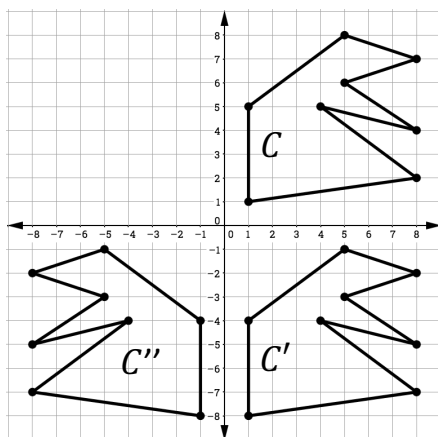
A.



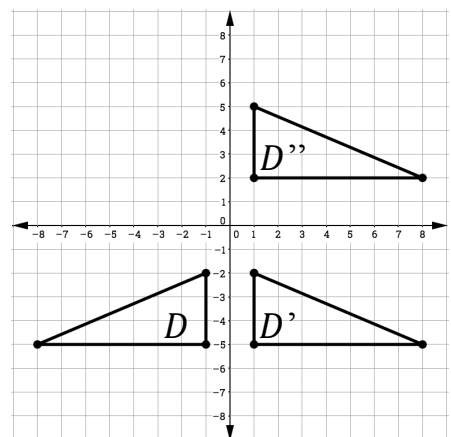
B.



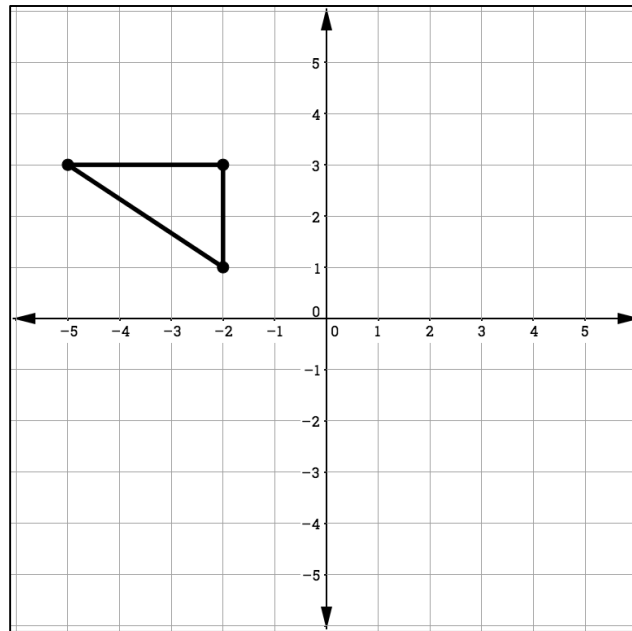
C.



D.

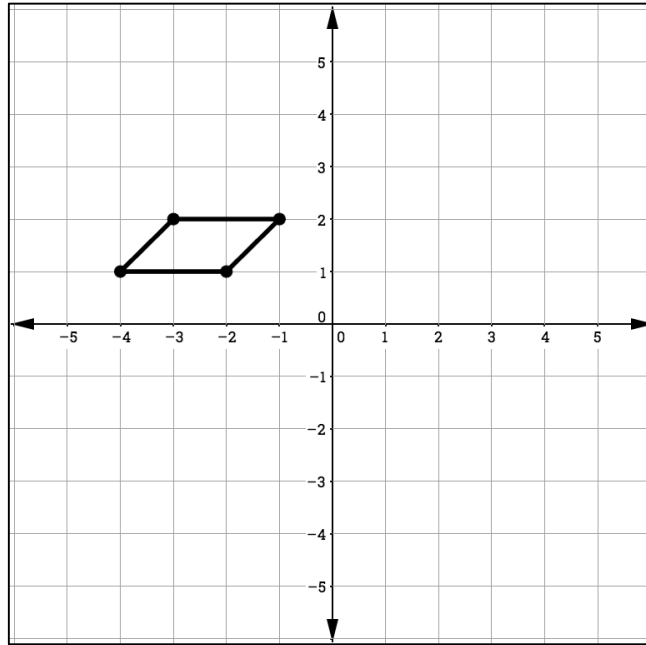


3. Consider the figure below and represent a composition of isometries by reflecting the figure over the x -axis and then translating the resulting image following the function rule $(x, y) \rightarrow (x + 1, y - 2)$.

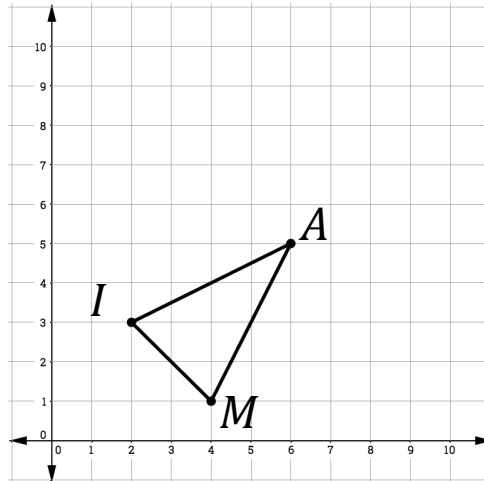


4. Which of the following is **not** a composition of isometries?
- (A) Reflection over $x = 2$, then rotation 90° clockwise about the origin
 - (B) Dilation with scale factor $\frac{1}{2}$, then rotation 270° clockwise about the origin
 - (C) Translation $(x, y) \rightarrow (x - 2, y + 1)$, then reflection over the x -axis
 - (D) Reflection over the x -axis, then reflection over the y -axis

5. Dilate the figure below with a scale factor of 1.5 centered at the origin and then rotate the figure 90° clockwise about the origin.



6. Triangle MIA is shown.



There are three highlights in the paragraph that show equations or phrases that are missing. For each highlight, write on the correct equation or phrase.

The vertices of $\triangle MIA$ are $M(4, 1)$, $I(2, 3)$, and $A(6, 5)$. A reflection across the _____ and then across the line _____ is the same as a rotation of _____ clockwise about the origin because the lines _____.