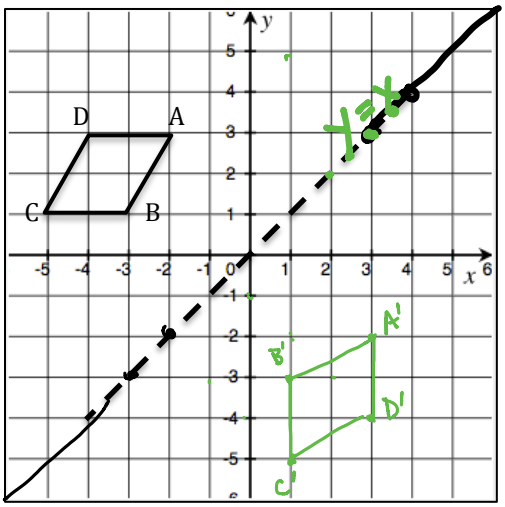
NAME:_____ Math 7.1, Period 1 and 2

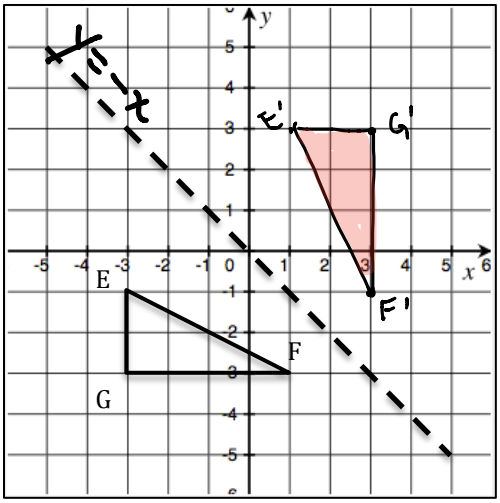
Mr. Rogove Date:_____

LEARNING OBJECTIVE: We will perform a sequence of reflections and translations. (Lesson 74)

ACTIVATING PRIOR KNOWLEDGE:

We can reflect objects around a line of reflection:

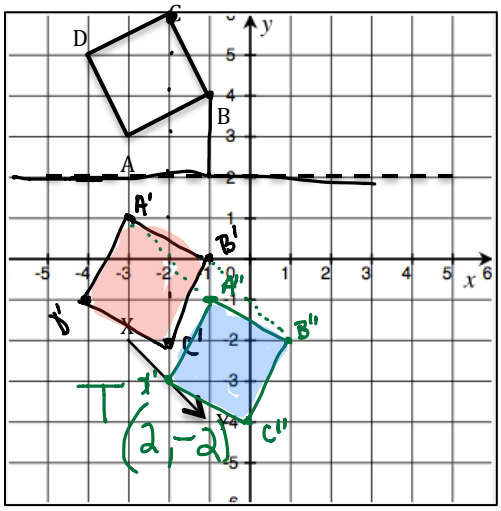




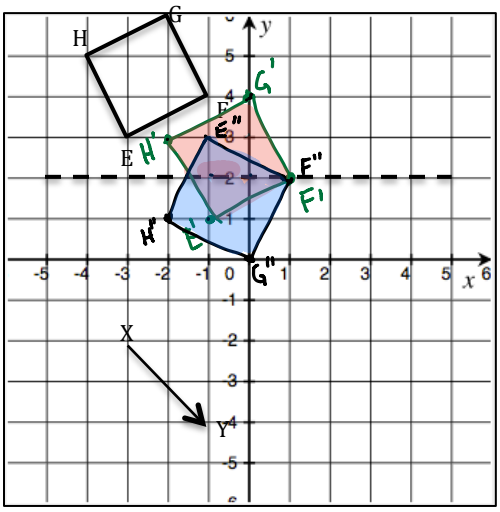
CONCEPT DEVELOPMENT:

- Does the order of the sequence of rigid motions matter?
  - YES! When you're talking about reflections and translations.
  - NO! Not when we're talking about two or more translations (we saw that in lesson 73).

Reflect first, then Translate



Translate First, then Reflect



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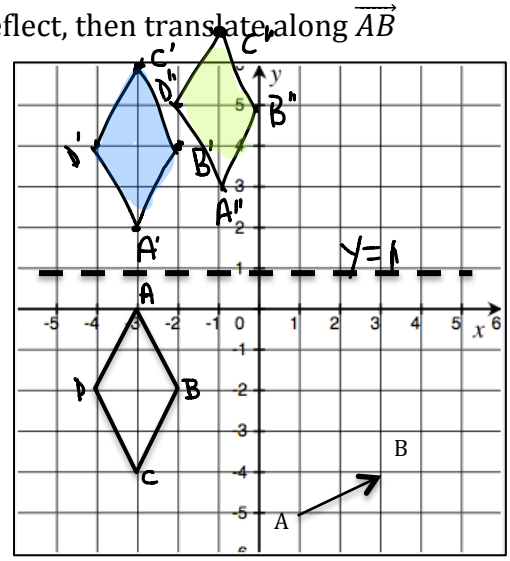
Guided Practice:

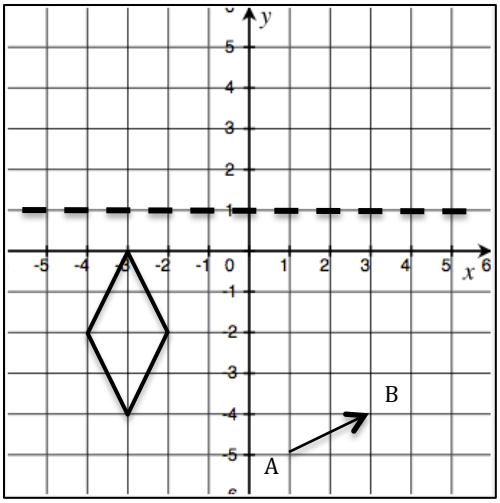
Steps for Sequencing Translations and Reflections

1. Read the instructions and perform your first transformation.
2. Perform your second transformation.
3. Label your points.

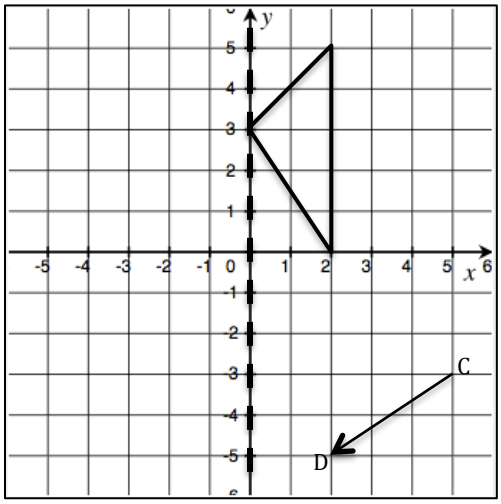
Reflect, then translate along $\overleftrightarrow{AB}$



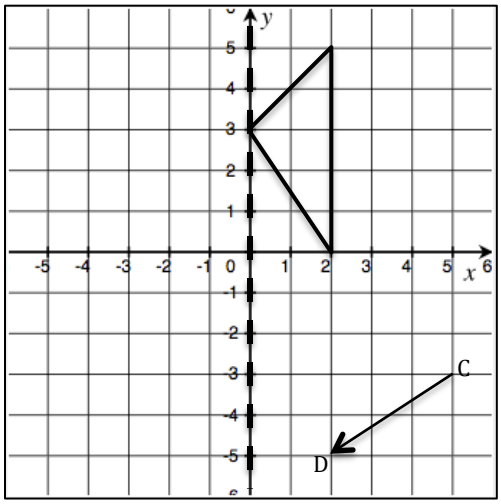
Translate along $\overleftrightarrow{AB}$ and then reflect



Translate along $\overleftrightarrow{CD}$ and then reflect



Reflect and then translate along $\overleftrightarrow{CD}$



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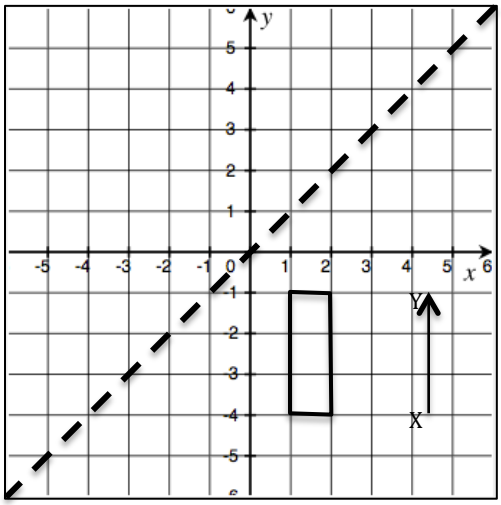
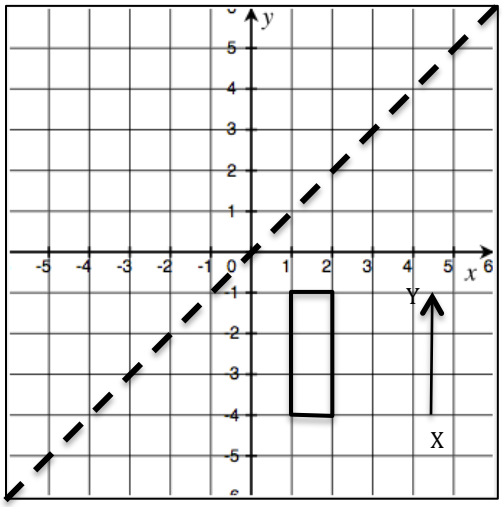
Steps for Sequencing Translations and Reflections

1. Read the instructions and perform your first transformation.
2. Perform your second transformation.
3. Label your points.

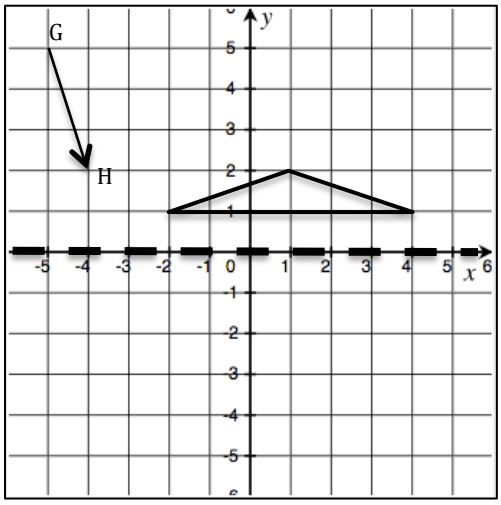
Reflect, then translate along $\overrightarrow{XY}$



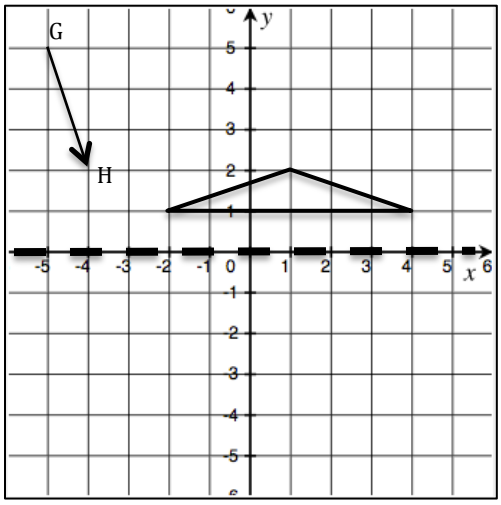
Translate along $\overrightarrow{XY}$, then reflect.



Translate along $\overrightarrow{GH}$, then reflect



Reflect, then translate along $\overrightarrow{GH}$



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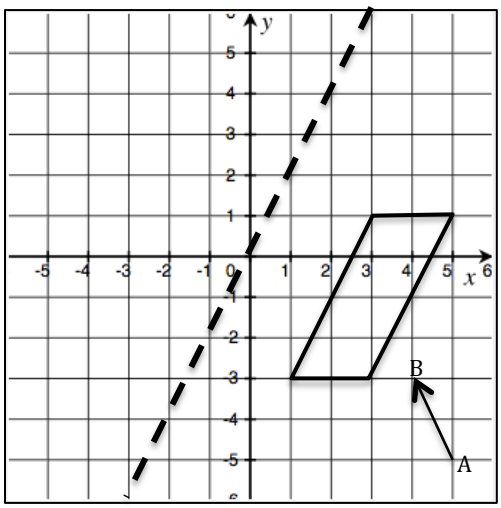
Independent Practice:

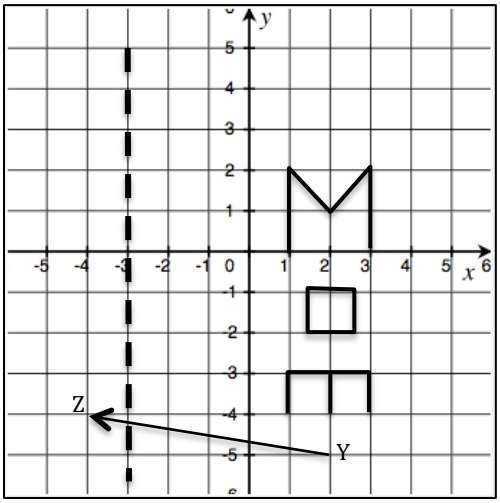
Steps for Sequencing Translations and Reflections

1. Read the instructions and perform your first transformation.
2. Perform your second transformation.
3. Label your points.

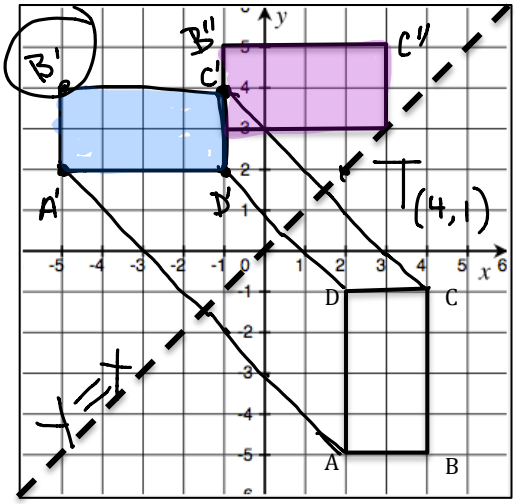
Reflect, and then translate along $\overleftrightarrow{AB}$



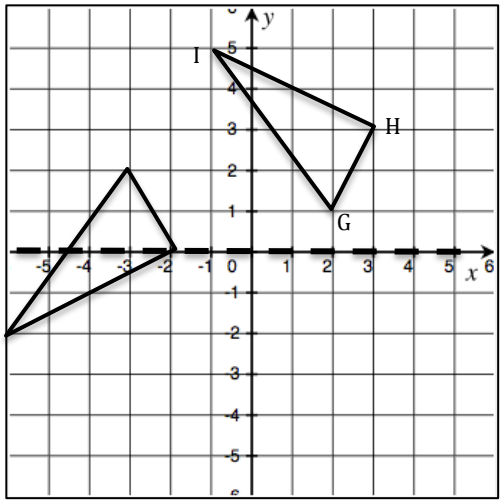
Translate along $\overleftrightarrow{YZ}$, then reflect.



Determine the order of the sequence of transformations, and write the translation along a vector, and draw rectangle A'B'C'D'.



Determine the order of the sequence of transformations, and write the translation along a vector, an draw triangle G'H'I'.



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Closure:

Using your whiteboards, draw an object (rectangle or triangle will work best), a line of reflection, and a vector. Show that the sequence of reflection and translation (which one you do first) actually matters in the final location of the object.

Teacher Notes:

HW should be KHAN Performing Transformations on the Coordinate Plane