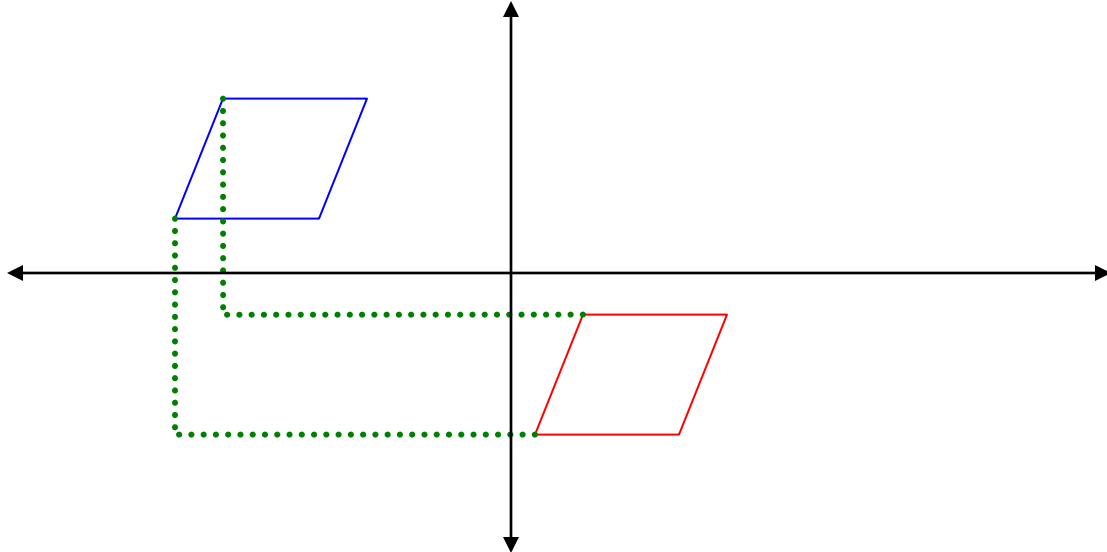


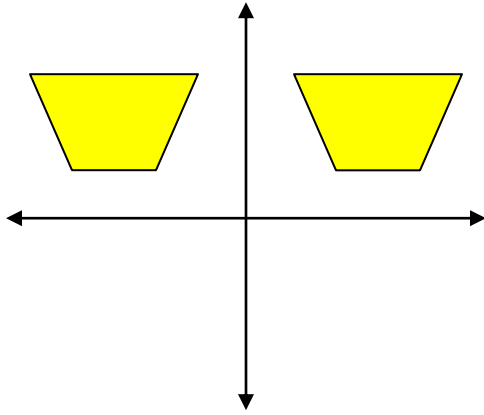
Translations and Reflections: This unit focuses on moving objects in a coordinate plane. A translation is often referred to as “a slide.” To perform a translation on an object, you must move each point the same number of units. For example, the following picture shows a translation:



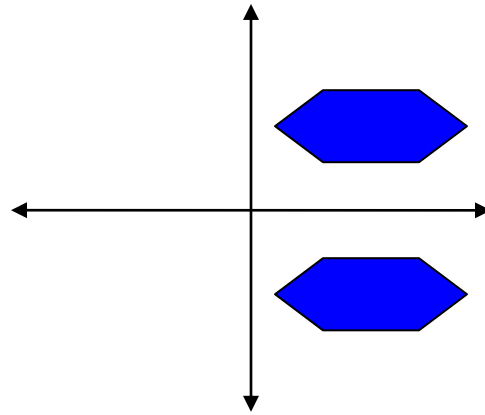
In this example of a translation, the original shape (blue) was moved to a new location (red). To do this, each point of the blue shape was moved down the same amount and to the right the same amount. This results in the exact same shape in a different spot on the graph.

TASK #1: Sketch an x-axis and y-axis using a ruler. Plot the following points: $(4, 4)$, $(6, 9)$, $(0, 7)$, $(1, 10)$. Once you have the shape on your coordinate plane, translate the object 4 units down and 6 units to the left.

Reflections: A reflection creates a mirror image of each point in a figure. You can either reflect an image over the x-axis or the y-axis. The result of a reflection is that the axis you reflected over becomes a line of symmetry. Here are examples of both:

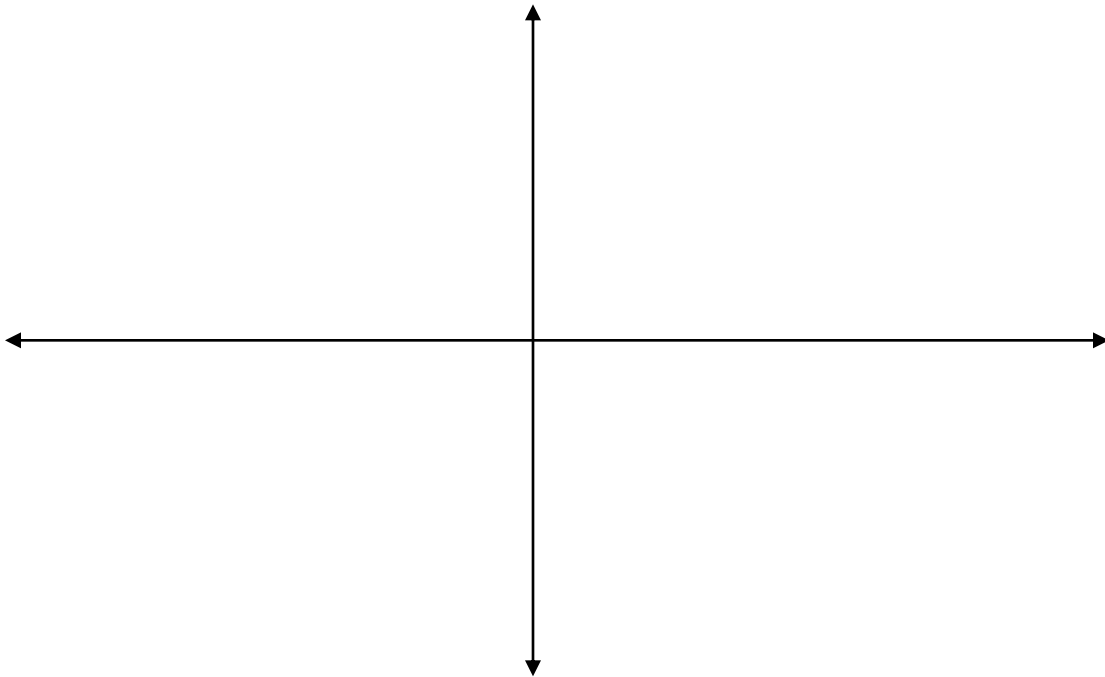


Reflection across y-axis



Reflection across x-axis

TASK #2: Plot the following points on the coordinate plane provided: $(-3,8)$ $(-6,6)$ $(-5,2)$
Once you have the shape on the graph, create a reflection across the x-axis. Once you have the reflection across the x-axis, try to reflect the original shape across the y-axis.



TASK #3: Since reflection is linked to the concept of symmetry, please PRINT your first and last name in block capital letters. The neater you print, the easier the task will be. Once your name has been printed, please lightly draw all lines of symmetry through the letters.