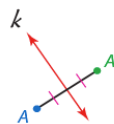


9-1**Reflection****Reflection**

A "flip" of a point over another point or a line

Point A has been reflected over line k and is now called A'

***REMINDER**

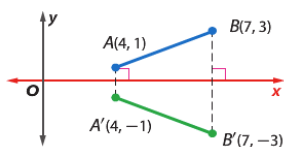
The original point is called the *Pre-Image*, the point after the reflection occurred is called the *Image*.

Reflection in the x-axis

Words To reflect a point in the x -axis, multiply its y -coordinate by -1 .

Symbols $(x, y) \rightarrow (x, -y)$

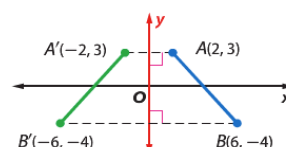
Example

**Reflection in the y-axis**

Words To reflect a point in the y -axis, multiply its x -coordinate by -1 .

Symbols $(x, y) \rightarrow (-x, y)$

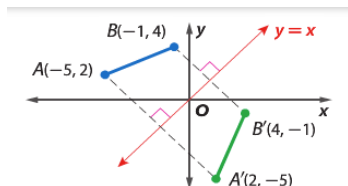
Example



KeyConcept Reflection in Line $y = x$

Words To reflect a point in the line $y = x$, interchange the x - and y -coordinates.

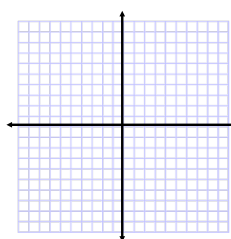
Symbols $(x, y) \rightarrow (y, x)$



Plot the following points. Then reflect them over the given line:

$A(2, 4)$, $B(-3, 1)$, $C(-4, -2)$

1) Reflect over x -axis



2) Reflect over $y = 2$

