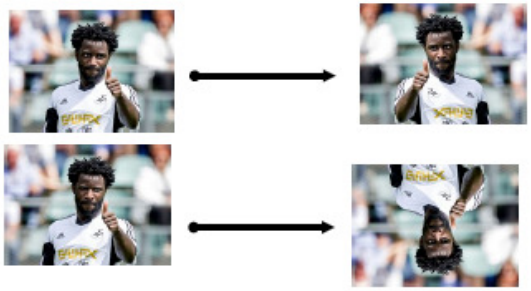
NOTES: LESSON 10.3 – REFLECTIONS W/ ALGEBRAIC RULE Name: _____

Learning Goal: I can ***reflect*** a figure and write the algebraic rule for the ***reflection***. **Meta de Aprendizaje**: *Puedo **reflejar** una figura y escribir la regla algebraica para la **reflexión**.*	**Language Goal:** I can write the algebraic rule for a ***reflection*** and justify my answer to a partner. **Lenguaje Objetivo**: *Puedo escribir la regla algebraica para una **reflexión** y justificar mi respuesta a un compañero.*

R E F L E C T I O N S

MOST IMPORTANT INFORMATION:

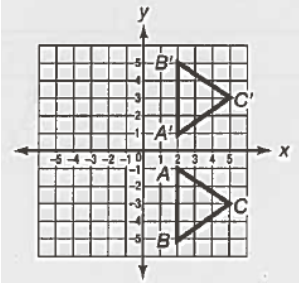
1. **Reflections** are _____ !



   - The angles of the OLD and NEW shape are _____ .
   - The sides of the OLD and NEW shape are _____ .

2. **Reflections** have only **TWO** rules:

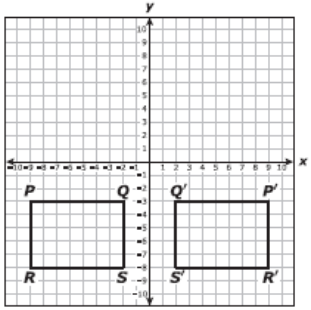
➢ **RULE 1: Reflect Across the X-Axis**



To reflect across the x-axis, change the sign of the y-coordinate

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

➢ **RULE 2: Reflect Across the Y-Axis**

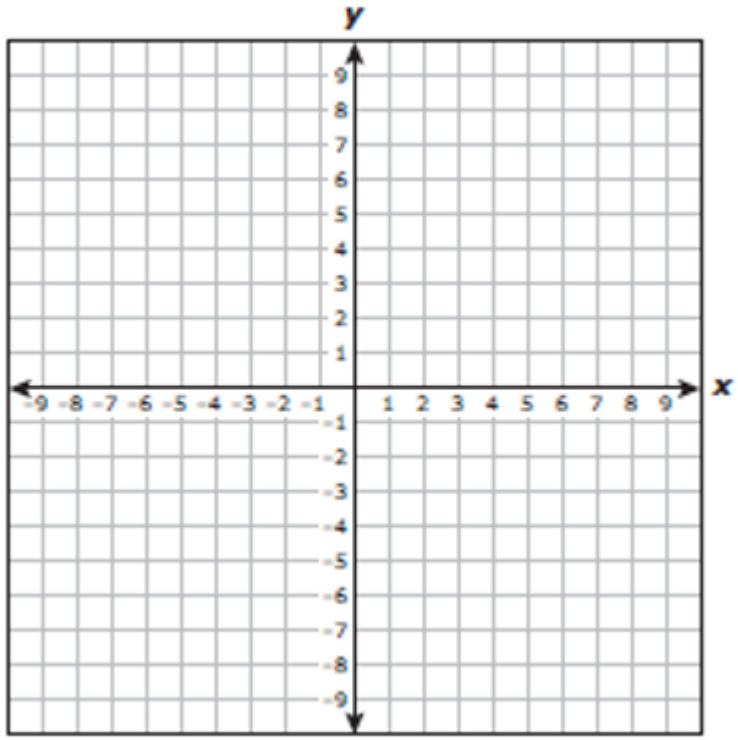


To reflect across the y-axis, change the sign of the x-coordinate

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

EXAMPLE 1

Point M is located at (4 , 6) on a coordinate grid. Point M is ***reflected*** **across the y-axis**.



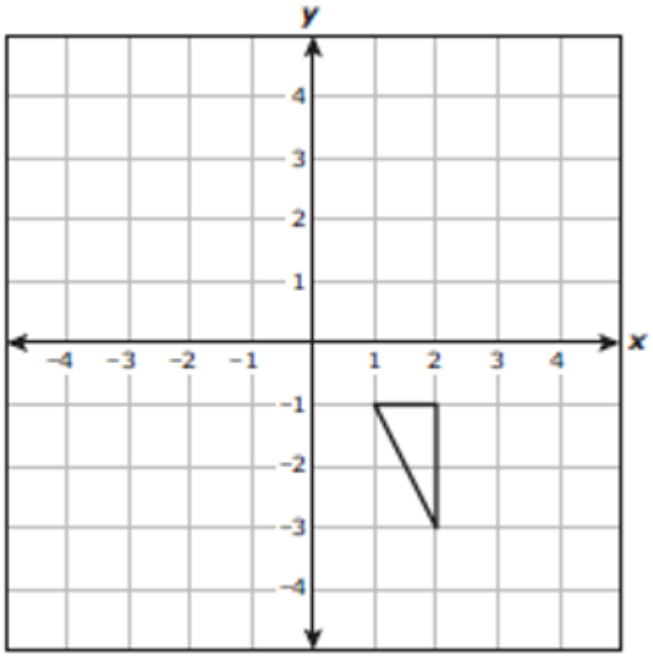
Point	(x , y) Coordinate
M	(4 , 6)
M’	(,)

What is the ***rule*** for the ***reflection***?

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

EXAMPLE 2

Becca drew a figure on the coordinate grid below.



She then ***reflected*** the figure **across the x-axis**. What ordered pair could **NOT** represent one of the new vertices?

A. (-1 , -1)
B. (2 , 1)
C. (1 , 1)
D. (2 , 3)

Point	(x , y) Coordinate
A	(,)
A’	(,)
B	(,)
B’	(,)
C	(,)
C’	(,)

What is the ***rule*** for the ***reflection***?

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