NOTES: LESSON 10.2 – TRANSLATIONS W/ ALGEBRAIC RULE Name: _____

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

T R A N S L A T I O N S

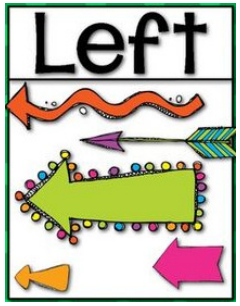
MOST IMPORTANT INFORMATION:

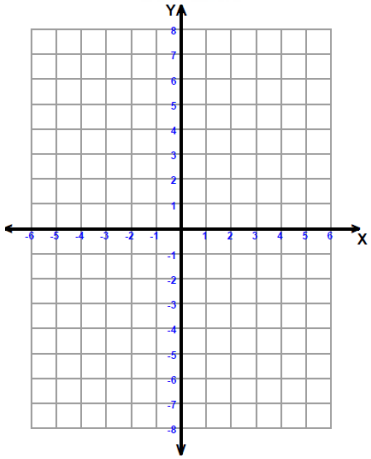
1. **Translations** are _____ !
   - The angles of the OLD and NEW shape are _____ .
   - The sides of the OLD and NEW shape are _____ .
2. **Translations** are the ONLY rule that _____ or _____ .

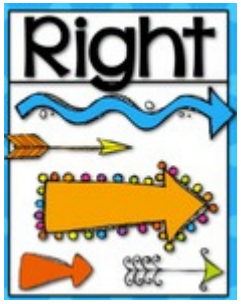
Moving 5 units RIGHT and 4 units DOWN:

$$(x, y) \rightarrow (x + 5, y - 4)$$

DIRECTION REMINDERS!

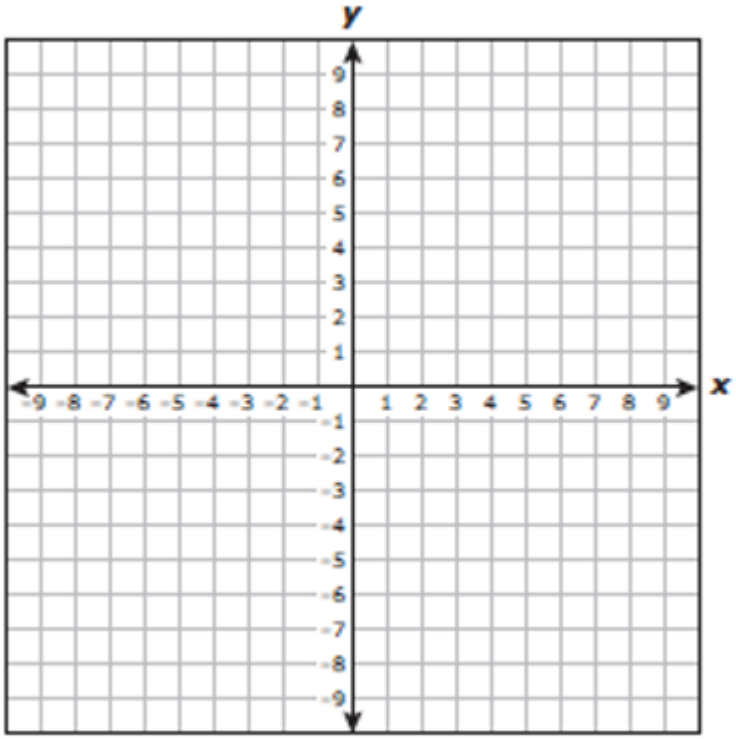






EXAMPLE 1

Point M is located at (4 , 6) on a coordinate grid. Point M is ***translated*** 8 units to the left and 9 units down.



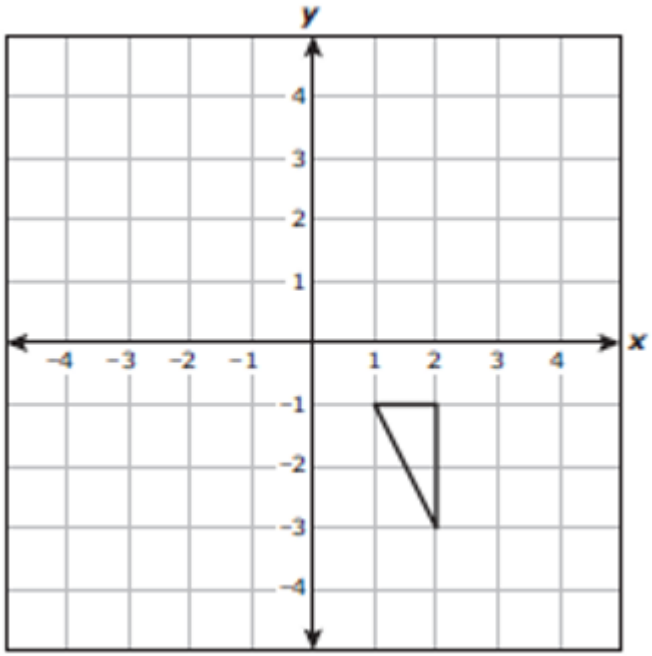
Point	(x , y) Coordinate
M	(4 , 6)
M’	(,)

What is the ***rule*** for the ***translation***?

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

EXAMPLE 2

Becca drew a figure on the coordinate grid below.



She then ***translated*** the figure -3 units horizontally and 2 units vertically. What ordered pair could represent one of the new vertices?

A. (-2 , -3)
B. (-1 , -1)
C. (4 , 1)
D. (1 , -2)

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

What is the ***rule*** for the ***translation***?

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