

Learning Goal: I can *rotate* a figure and write the algebraic rule for the *rotation*.
Meta de Aprendizaje: Puedo *rotar* una figura y escribir la regla algebraica para la *rotación*.

Language Goal: I can write the algebraic rule for a *rotation* and justify my answer to a partner.

Lenguaje Objetivo: Puedo escribir la regla algebraica para una *rotación* y justificar mi respuesta a un compañero.

ROTATIONS



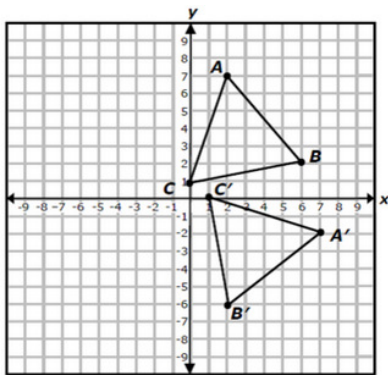
MOST IMPORTANT INFORMATION:

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

- CLOCKWISE** | **COUNTER-CLOCKWISE**

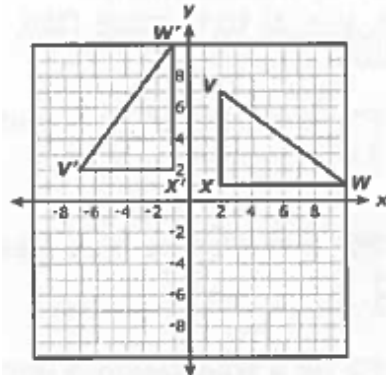
- Rotations** have only **FOUR** rules:

90° Clockwise
(or 270° Counter-Clockwise)



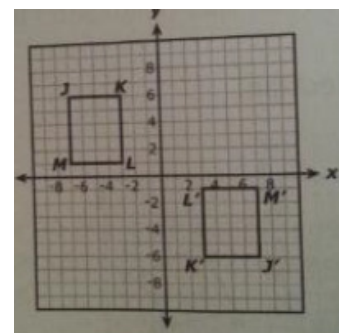
$(x, y) \rightarrow$

90° Counter-Clockwise
(or 270° Clockwise)



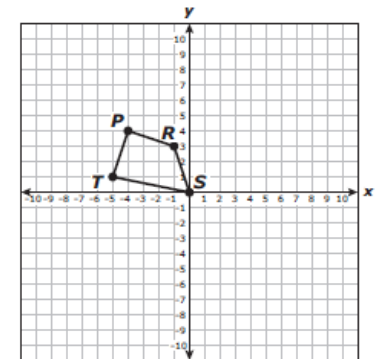
$(x, y) \rightarrow$

180° Clockwise
(or 180° Counter-Clockwise)



$(x, y) \rightarrow$

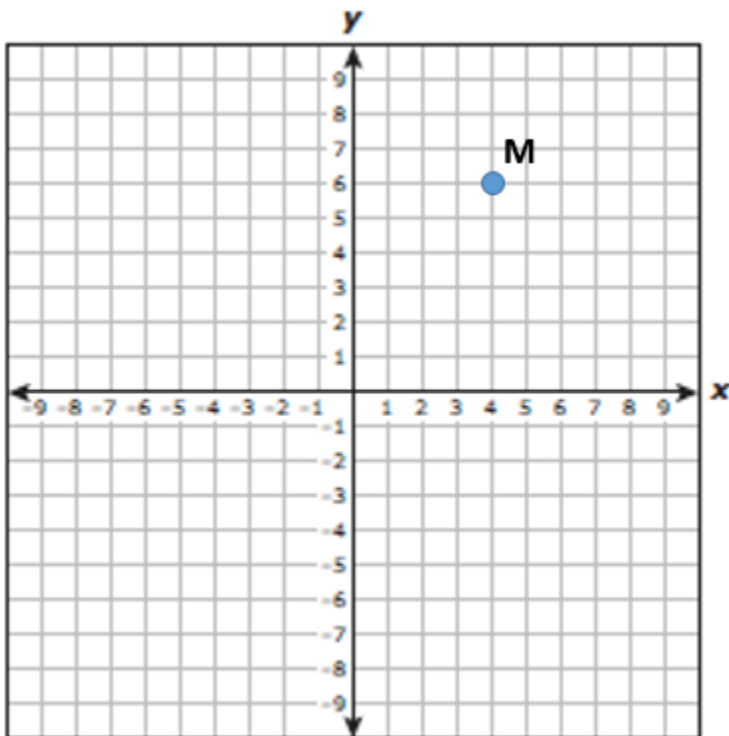
360° Clockwise
(or 0° Counter-Clockwise)



$(x, y) \rightarrow$

EXAMPLE 1

Point M is located at (4 , 6) on a coordinate grid. Point M is *rotated* 270° Clockwise.



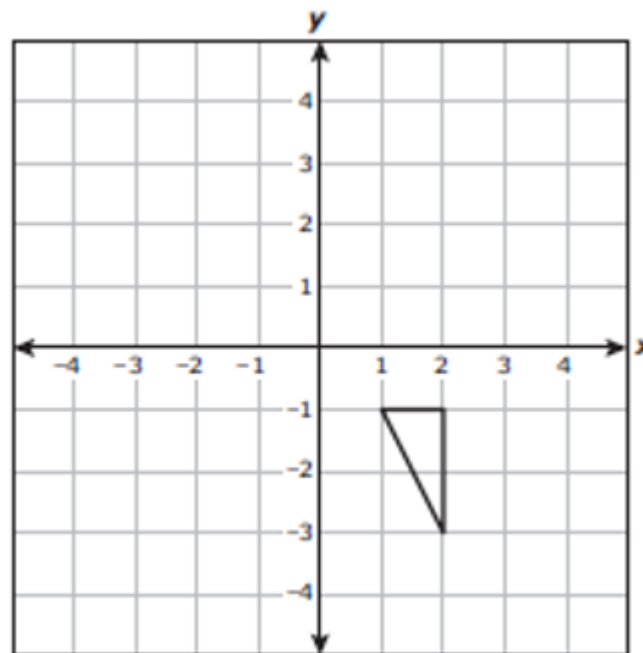
| Point | (x , y) Coordinate |
|-------|-------------------------|
| M | (4 , 6) |
| M' | (,) |

What is the *rule* for the *rotation*?

$$(x, y) \rightarrow (\underline{\hspace{2cm}} , \underline{\hspace{2cm}})$$

EXAMPLE 2

Becca drew a figure on the coordinate grid below.



She then *rotated* the figure 90° Clockwise. What ordered pair could **NOT** represent one of the new vertices?

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

| Point | (x , y) Coordinate |
|-------|-------------------------|
| A | (,) |
| A' | (,) |
| B | (,) |
| B' | (,) |
| C | (,) |
| C' | (,) |

What is the *rule* for the *rotation*?

$$(x, y) \rightarrow (\underline{\hspace{2cm}} , \underline{\hspace{2cm}})$$