

Date: _____

Intervention: Reflections

Learning Target:

By the end of this lesson students will be able to use rigid motions to reflect figures on the coordinate plane and describe the effects of the reflections

Pre-learning



Which real-world scenario best models a reflection across the x-axis?

- A) A flag waving in the wind
- B) A tree and its reflection in still water
- C) A bus driving in a straight line
- D) A rock rolling down a hill

Reflection x axis

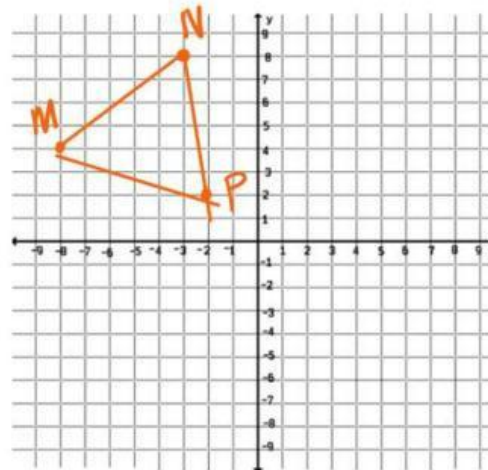
Pre-image

M(-8, 4)

N(-3, 8)

P(-2, 2)

Reflected over x-axis (,)



Reflection y axis

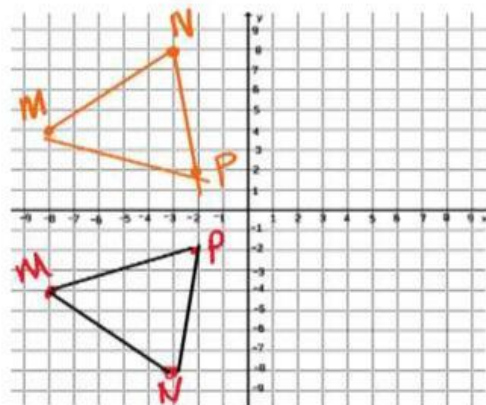
Pre-image

M(-8, 4)

N(-3, 8)

P(-2, 2)

Reflected over y-axis (,)





Reflection $y=x$

Pre-image

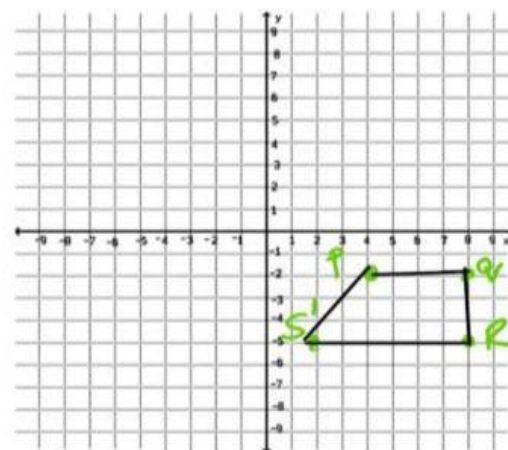
Reflected over $y=x$

P(4, -2)

Q(8, -2)

R(8, -5)

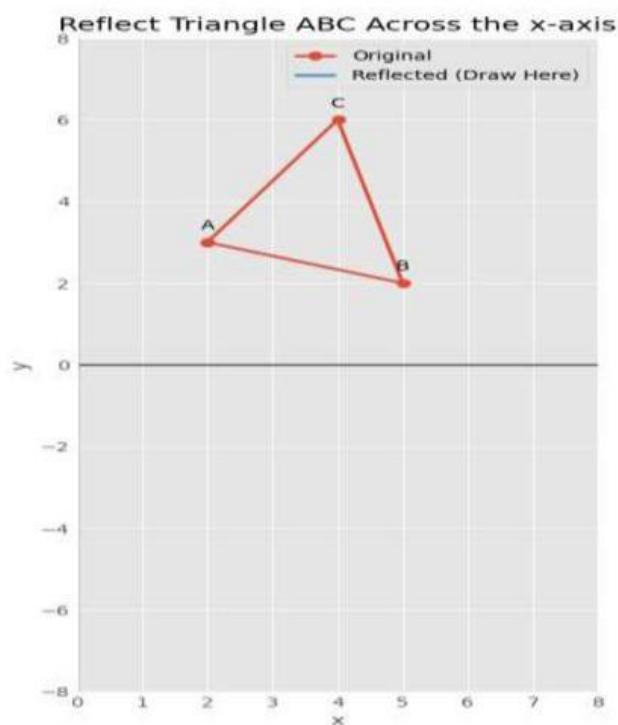
S(2, -5)



Differentiated Work:

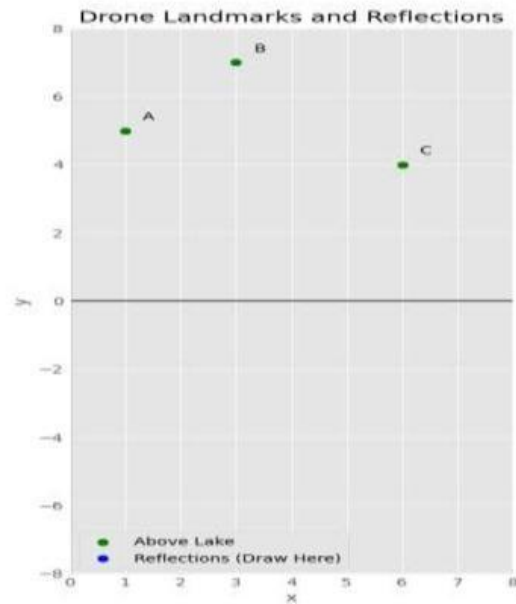
On Average:

Reflect the triangle ABC with vertices $A(2, 3)$, $B(5, 2)$, $C(4, 6)$ across the x -axis.



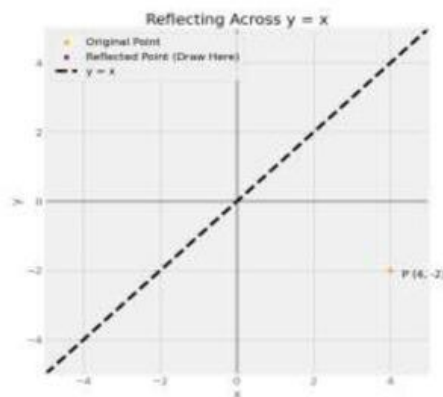
Real life Application

A drone flies over a lake and sees three objects at $(1, 5)$, $(3, 7)$, $(6, 4)$. If the lake's surface is the **x-axis**, plot the original points, then plot their reflections as if you saw them in the water.

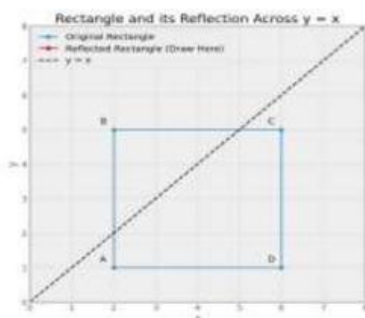


Challenge:

Reflect the point $(4, -2)$ across the line $y = x$. Plot both the original and reflected points.



Gifted and Talented



A rectangle has vertices at $(2, 1)$, $(2, 5)$, $(6, 5)$, $(6, 1)$. Reflect the rectangle across $y = x$. Plot and label both rectangles. **Plot and label the reflected rectangle as A' , B' , C' , D' .**