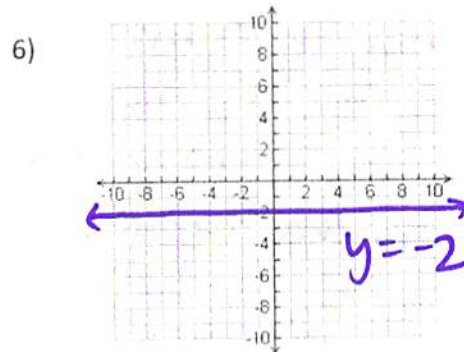
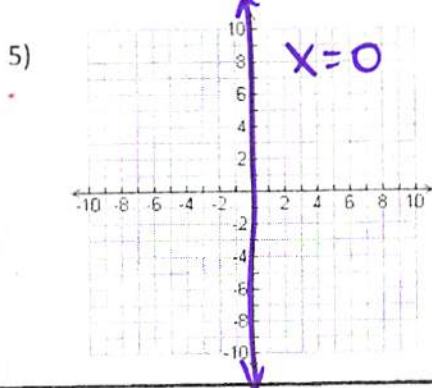
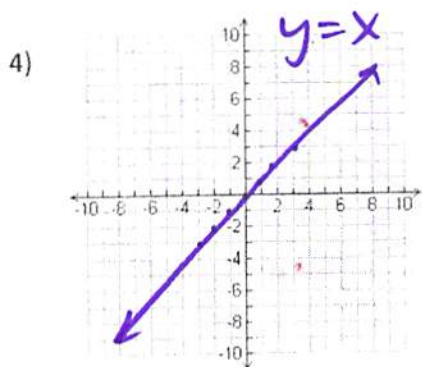


1.3 Reflections & Rules Guided Notes

Warm Up:

- 1) Left 3 up 4
- 2) $A'(4,0)$
- 3) $A(3,2)$



Definition of a Reflection: transformation of a figure that creates a mirror image by "flipping" the image of a line.

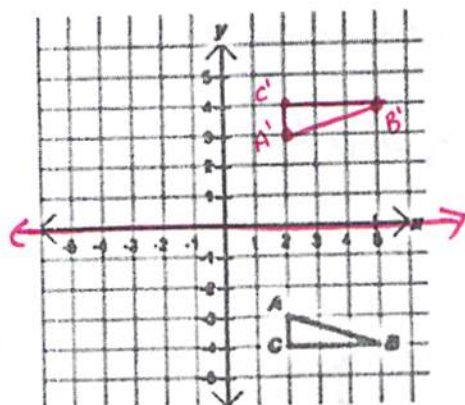
Graph	List the Pre-Image and Image Coordinates	What line did it reflect across?	Write a rule that describes this reflection.
	$W(1,-2) \rightarrow W'(1,2)$ $A(3,-5) \rightarrow A'(3,5)$ $G(4,-4) \rightarrow G'(4,4)$ $R(3,-1) \rightarrow R'(3,1)$	<u>X-axis</u> also known as <u>$y=0$</u>	$(x,y) \rightarrow (x,-y)$ - x's stay same, y changes.
	$A(2,-4) \rightarrow A'(-2,-4)$ $P(1,1) \rightarrow P'(-1,1)$ $U(2,2) \rightarrow U'(-2,2)$ $H(4,-3) \rightarrow H'(-4,-3)$	<u>y-axis</u> also known as <u>$x=0$</u>	$(x,y) \rightarrow (-x,y)$ - y stays same, x changes.

- 1) Reflect $\triangle ABC$ over the x-axis. *draw on graph.*
- use counting method.

- 2) Write a rule for this transformation.

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

* x's stay ~~the~~ same, y changes

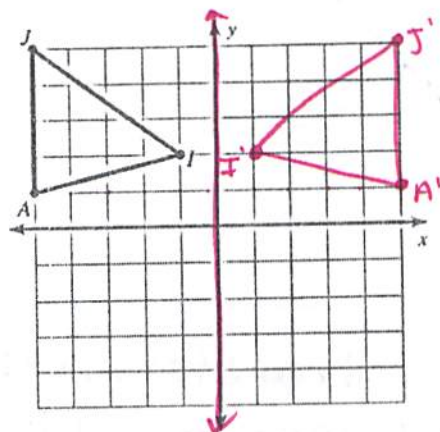


- 3) Reflect $\triangle JAI$ over the y-axis. *draw on graph*
- use counting method.

- 4) What is the rule representing this transformation?

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

* y's stay same, x changes.

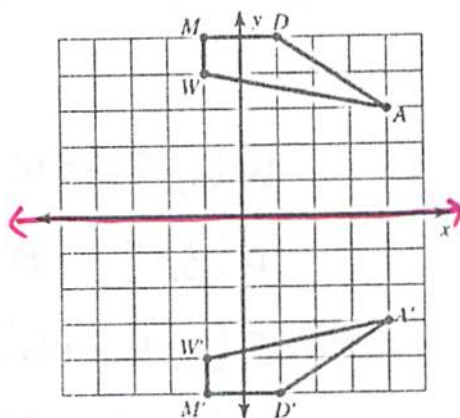


- 5) What transformation has occurred in the figure?

reflect over x-axis.

- 6) What is the rule that represents this transformation?

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



- 7) $H(4, -3)$ is reflected to produce $H'(-4, -3)$. If the pre-image of A is located at $(1, 3)$, what is the ordered pair that represents the image of Point A using this same rule of transformation?

