

2/20/20 - Warm Up Problem

Describe in words what each translation rule means.

1. $T_{\langle 2, 6 \rangle}(A)$ Right 2, UP SIX

2. $T_{\langle -3, 4 \rangle}(B)$ 3 to the left, 4 up

3. $T_{\langle 0, -5 \rangle}(C)$ DOWN 5

What transformation is represented here?

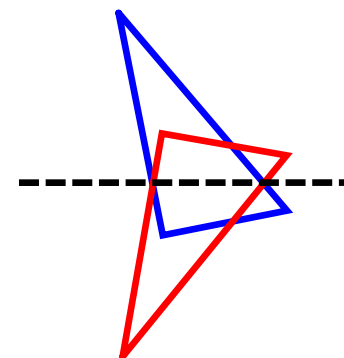
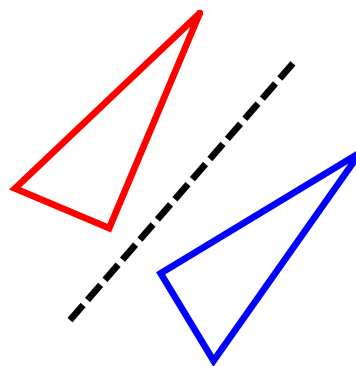
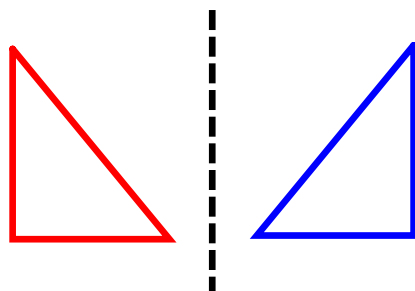


Section 9.2 - Reflections

Goal: graph reflections in the coordinate plane and write and use function notation for reflections

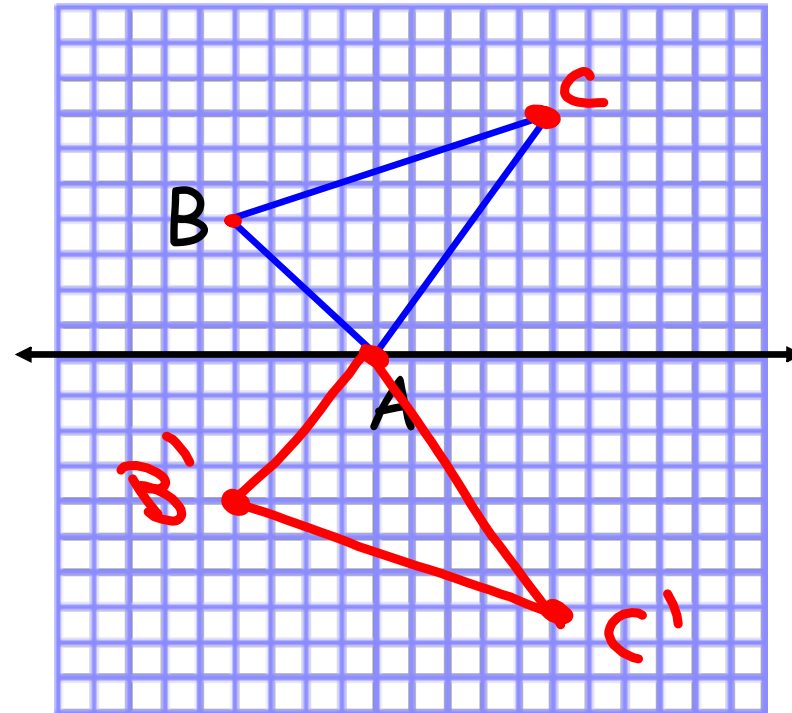
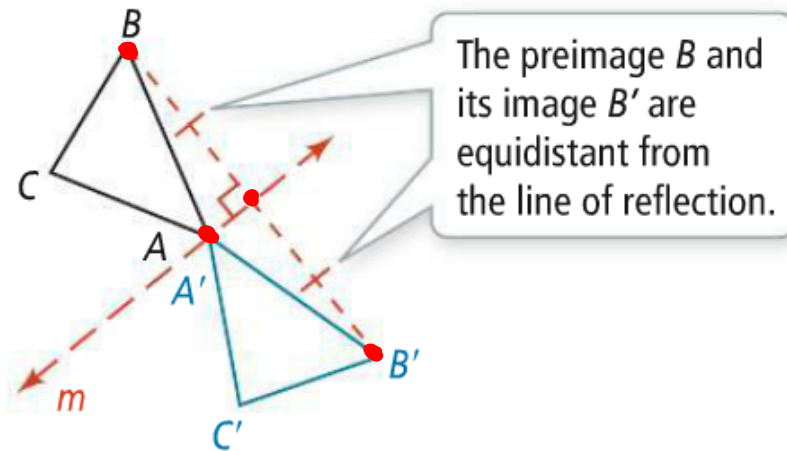
Reflection: (flip) a rigid motion where each point is mapped to the other side of a line (the line of reflection)

- the preimage and image are congruent but have opposite orientations



Properties of Reflections

1. If point A is on the line of reflection, then point A does not move.
($A = A'$)
2. If point B is not on the line of reflection, then B' is located directly opposite B and the same distance away from the line of reflection that B is.

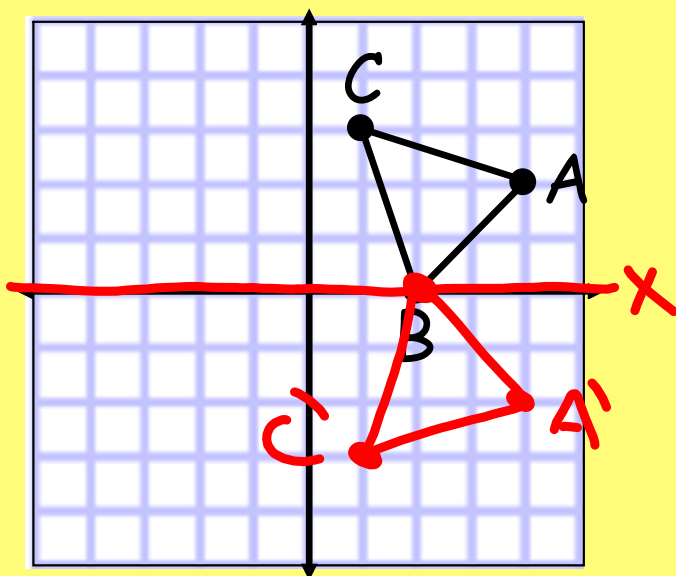


Function Notation for Reflections

$R_m(A) = A'$ means point A is reflected over line m

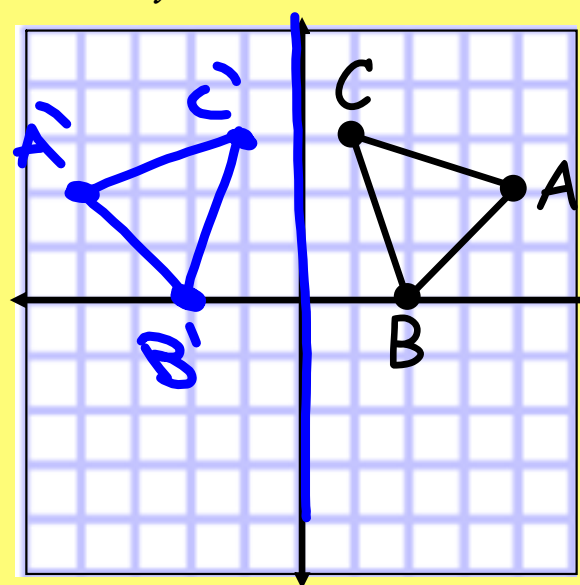
Reflect over the x-axis.

$R_{x\text{-axis}}(\triangle ABC)$



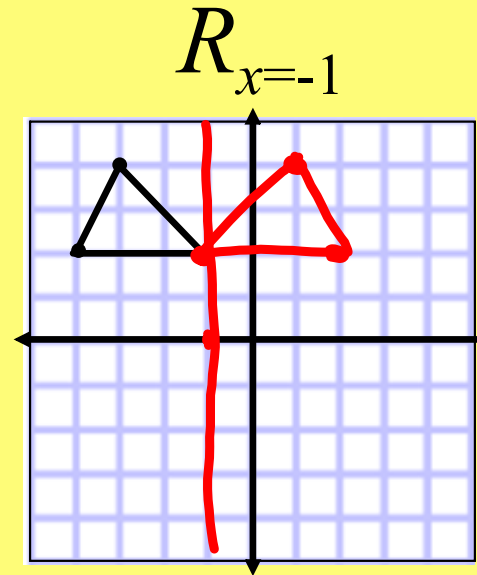
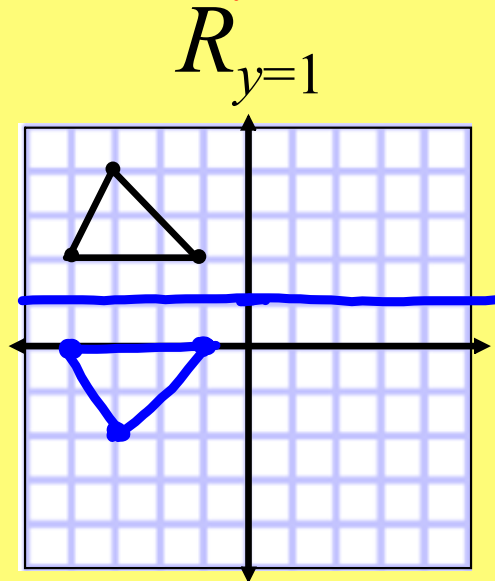
Reflect over the y-axis.

$R_{y\text{-axis}}(\triangle ABC)$



Other Vertical and Horizontal Lines

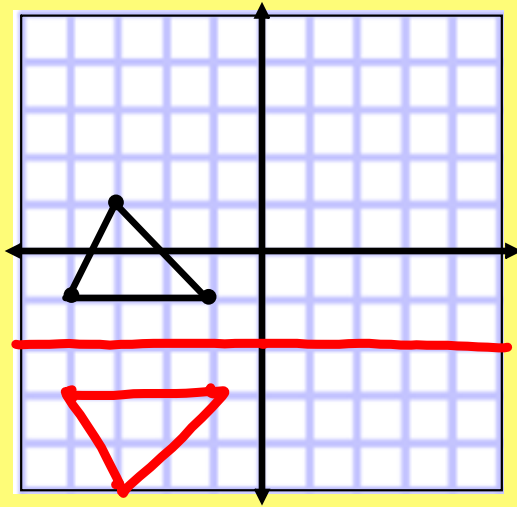
Graph these examples in your notes.



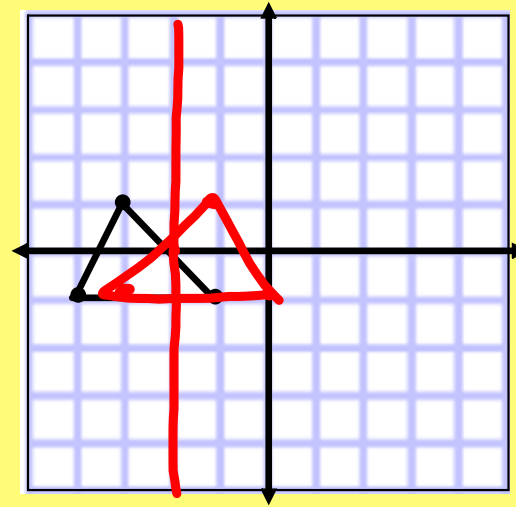
- If the beginning is $y =$, then the line is horizontal.
- If the beginning is $x =$, then the line is vertical.

Draw each reflection.

$$R_{y=-2}$$



$$R_{x=-2}$$

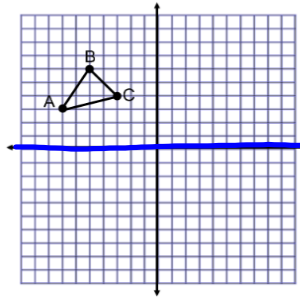


Assignment: Concept 21 Worksheet (10-18)

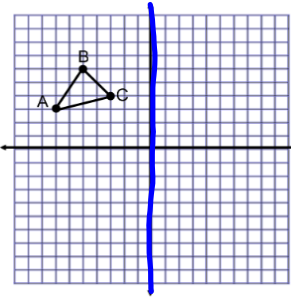
REFLECTIONS

Reflect each figure across the given line of reflection.

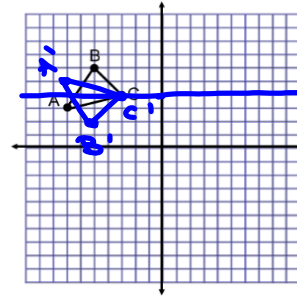
10. $R_{x\text{-axis}}(\triangle ABC)$



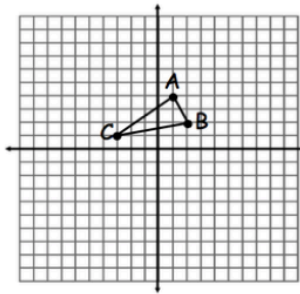
11. $R_{y\text{-axis}}(\triangle ABC)$



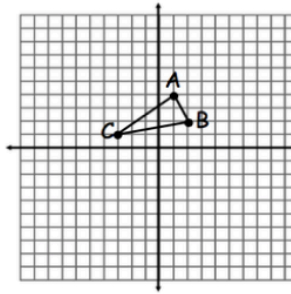
12. $R_{y=4}(\triangle ABC)$



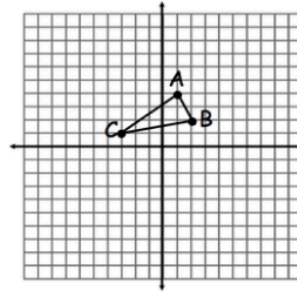
13. $R_{x\text{-axis}}(\triangle ABC)$



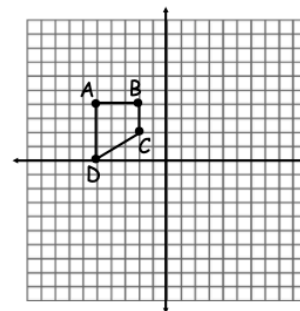
14. $R_{y\text{-axis}}(\triangle ABC)$



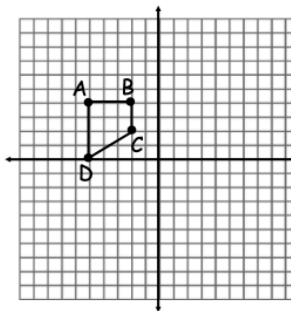
15. $R_{x=-3}(\triangle ABC)$



16. $R_{x\text{-axis}}(ABCD)$



17. $R_{y\text{-axis}}(ABCD)$



18. $R_{y=2}(ABCD)$

