

# 5-1 Reflections

I can reflect a figure around the x-axis, y-axis, and the origin.



## Notes

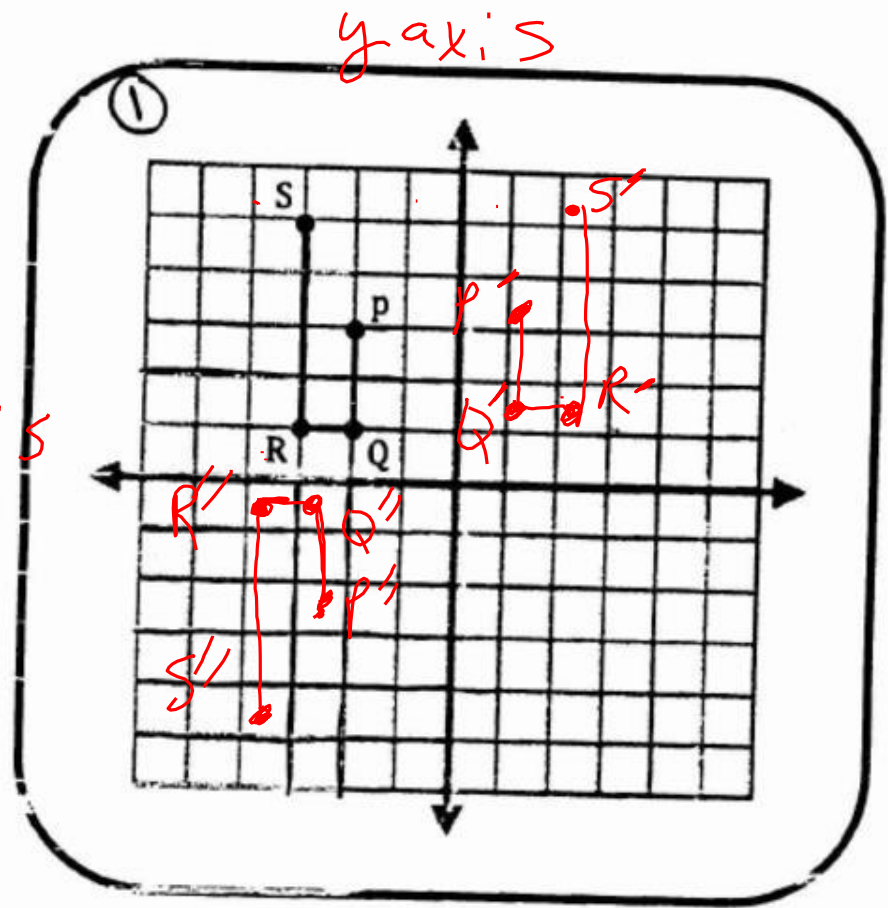
- Transformation - a shape goes through a change.
- Reflection - When a shape is reflected around the x-axis, y-axis, or origin.
- Line of reflection - the line that the shape is reflected across.
- Pre-image - original shape, the shape that is going to be transformed.
- Image - the shape after it is transformed.

- The points of the image are marked with an apostrophe which is pronounced “prime.”
- Point A becomes A' (A prime).
- Point B becomes B' (B prime)

Take the graph paper and write 5-1 notes. Fold it in half twice. This divides the paper into 4 sections to work 4 problems.

1. Reflect the figure around the y-axis and the x-axis.

X-axis



## 2. Reflection around the x-axis

$P(-2, 3)$  become  $P' (2, -3)$

$Q(-2, 1)$  become  $Q' (-2, -1)$

$R(-3, 1)$  become  $R' (-3, -1)$

$S(-3, 5)$  become  $S' (-3, -5)$

### 3. Reflection around the y-axis

P(-2, 3) become P'' (2, 3 )

Q(-2, 1) become Q'' (2, 1 )

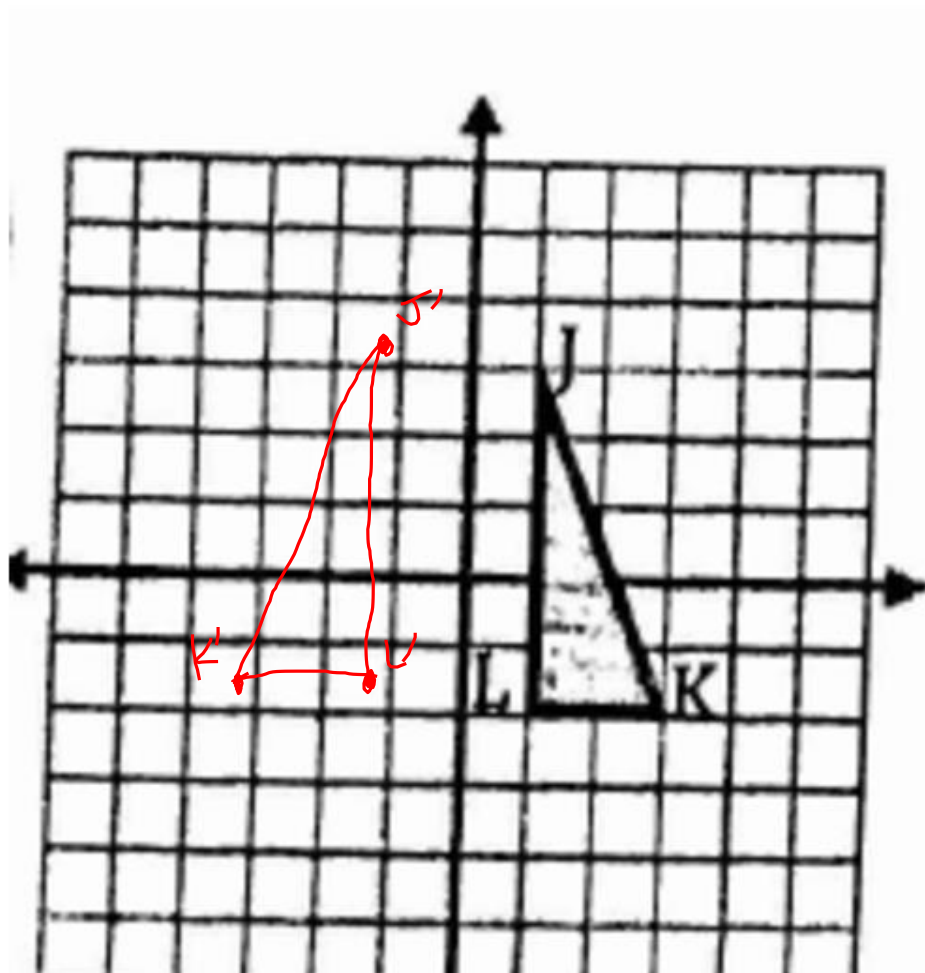
R(-3, 1) become R'' (3, 1 )

S(-3, 5) become S'' (3, 5 )

Origin

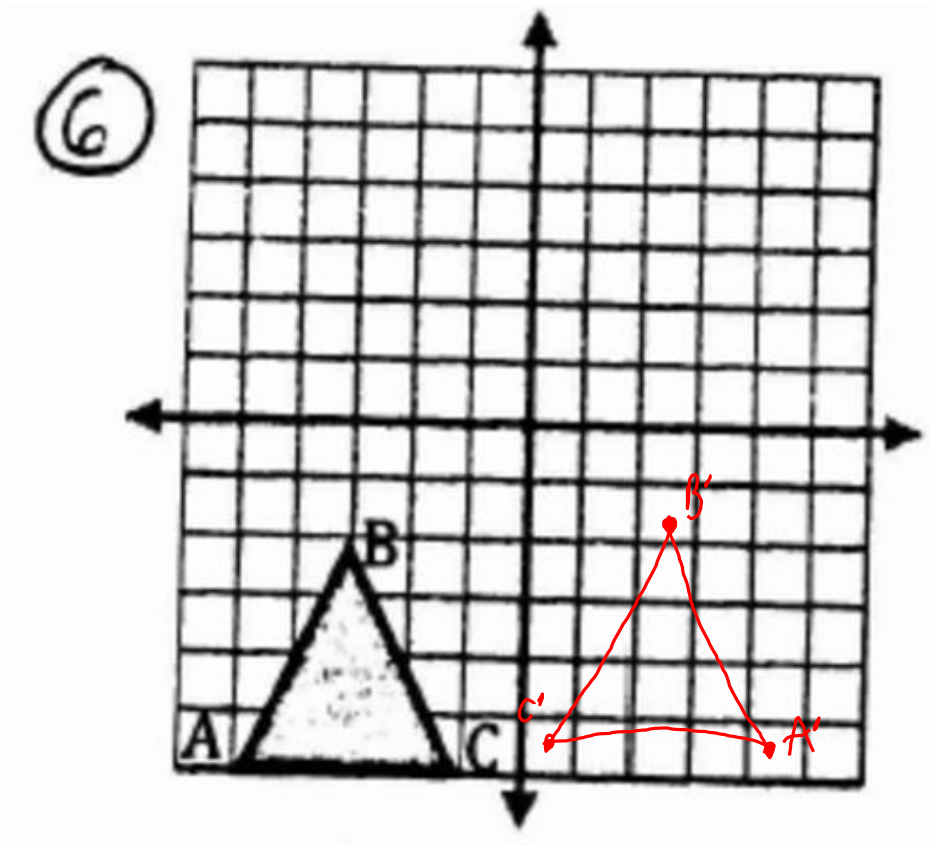
4	x-axis	y-axis	both at once!
$(x,y)$	$(x,-y)$	$(-x,y)$	$(-x,-y)$

## 5. Reflect around the y-axis

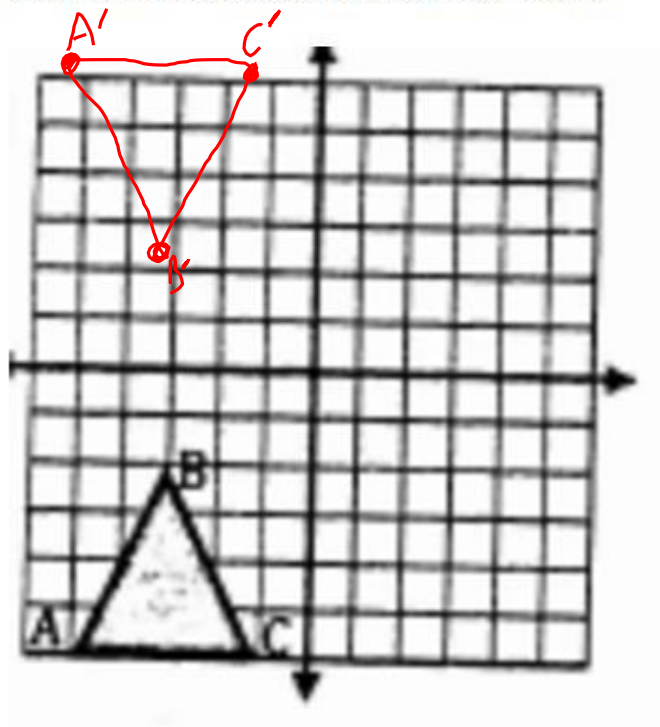




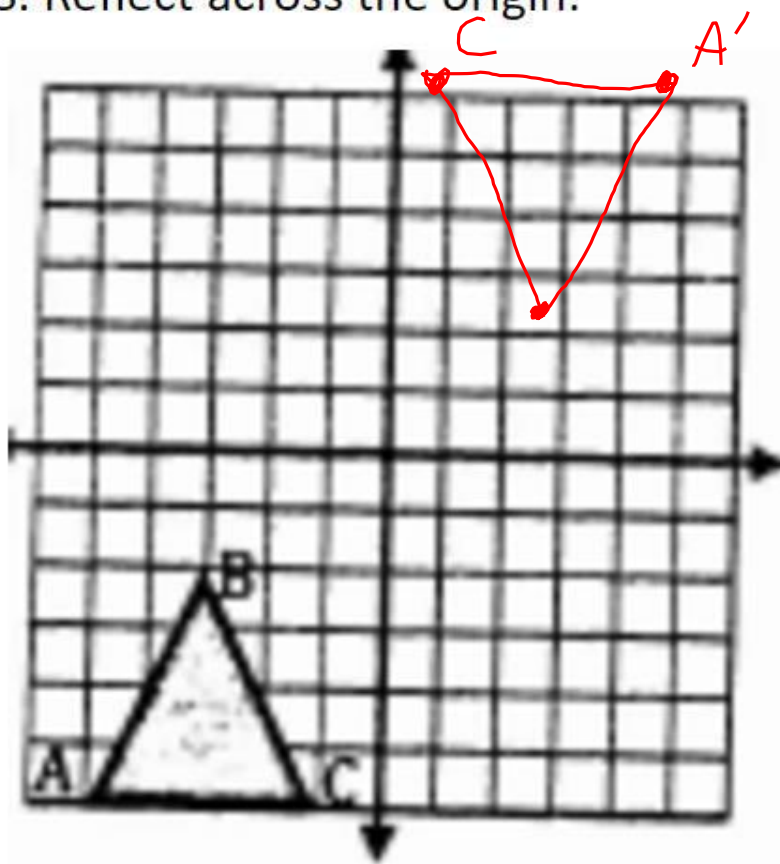
## 6. Reflect around the y-axis



7. Reflect around the x-axis.



8. Reflect across the origin.



$$A (-5, -6)$$

$$B (-3, -2)$$

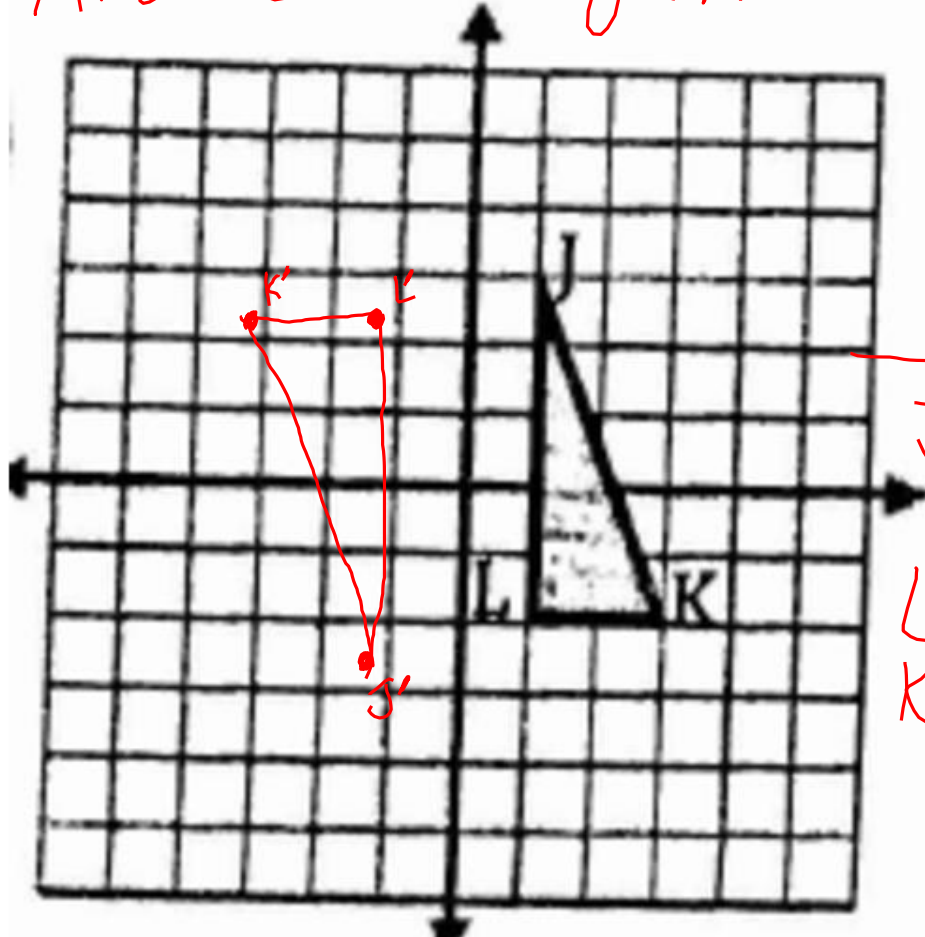
$$C (-1, -6)$$

$$A' (5, 6)$$

$$B' (3, 2)$$

$$C' (1, 6)$$

Reflect  
9 Around origin



$J(1, 3)$

$L(1, 2)$

$K(3, 2)$

$J'(-1, -3)$

$L'(-1, -2)$

$K'(-3, -2)$



Assignment: 5-1 worksheet. Must do on EOG graph paper.

