

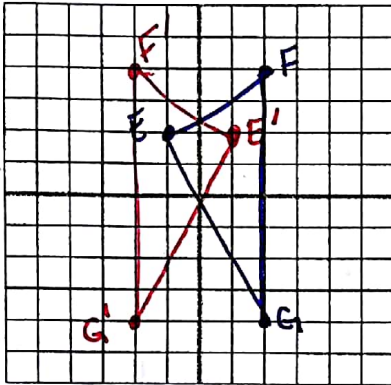
Day 3 Reflections Hw

Graph the image using the transformation given, and give the algebraic rule as requested.

1.  $\triangle EFG$  if  $E(-1, 2)$ ,  $F(2, 4)$  and  $G(2, -4)$  reflected over the  $y$ -axis.

$E'$   $(1, 2)$   
 $F'$   $(-2, 4)$   
 $G'$   $(-2, -4)$

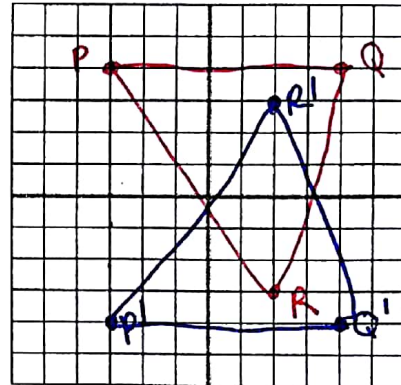
Rule:  
 $(x, y) \rightarrow$   
 $(-x, y)$



2.  $\triangle PQR$  if  $P(-3, 4)$ ,  $Q(4, 4)$  and  $R(2, -3)$  reflected over the  $x$ -axis.

$P'$   $(-3, -4)$   
 $Q'$   $(4, -4)$   
 $R'$   $(2, 3)$

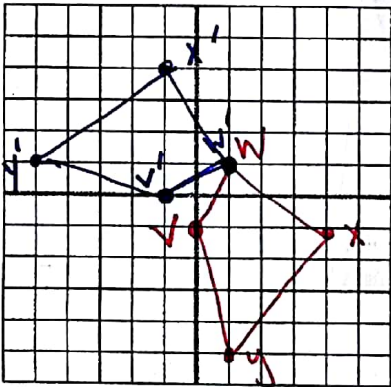
Rule:  
 $(x, y) \rightarrow$   
 $(x, -y)$



3. Quadrilateral  $VWXY$  if  $V(0, -1)$ ,  $W(1, 1)$ ,  $X(4, -1)$ , and  $Y(1, -5)$  reflected over the line  $y = x$ .

$V'$   $(-1, 0)$   
 $W'$   $(1, 1)$   
 $X'$   $(-1, 4)$   
 $Y'$   $(-5, 1)$

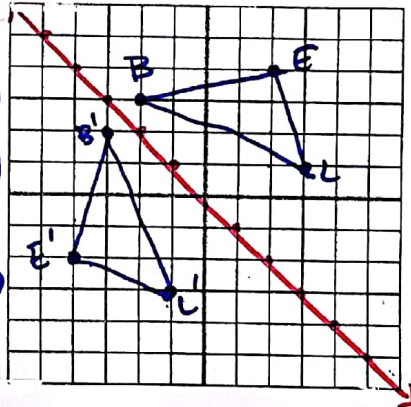
Rule:  
 $(x, y) \rightarrow$   
 $(y, x)$



4.  $\triangle BLC$  if  $B(-2, 3)$ ,  $E(2, 4)$ , and  $L(3, 1)$  reflected over the line  $y = -x$ .

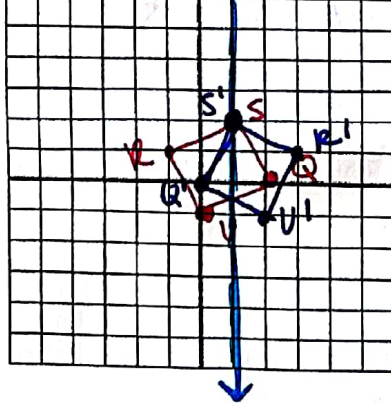
$B'$   $(-3, 2)$   
 $E'$   $(-4, -2)$   
 $L'$   $(-1, -3)$

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



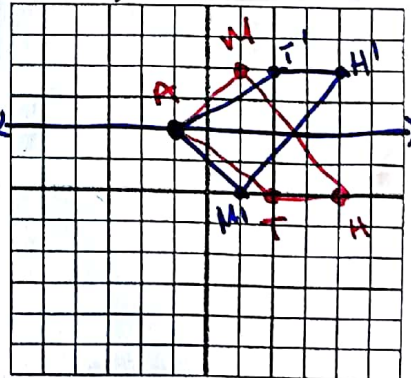
5. Quadrilateral  $SQUR$  if  $S(1, 2)$ ,  $Q(2, 0)$ ,  $U(0, -1)$ , and  $R(-1, 1)$  reflected over the line  $x = 1$ .

$S'$   $(1, 2)$   
 $Q'$   $(0, 0)$   
 $U'$   $(2, -1)$   
 $R'$   $(3, 1)$



6. Quadrilateral  $MATH$  if  $M(1, 0)$ ,  $A(-1, 2)$ ,  $T(2, 0)$  and  $H(4, 0)$  reflected over  $y = 2$ .

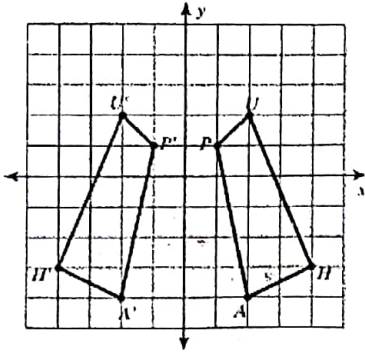
$M'$   $(1, 0)$   
 $A'$   $(-1, 2)$   
 $T'$   $(2, 4)$   
 $H'$   $(4, 4)$



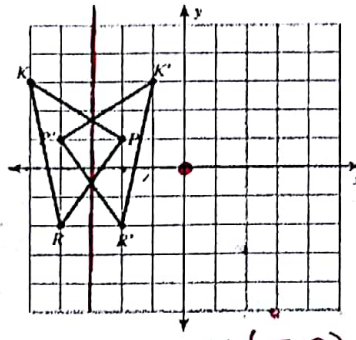
Write a specific description of each transformation and give the algebraic rule, as requested.

7.

8.

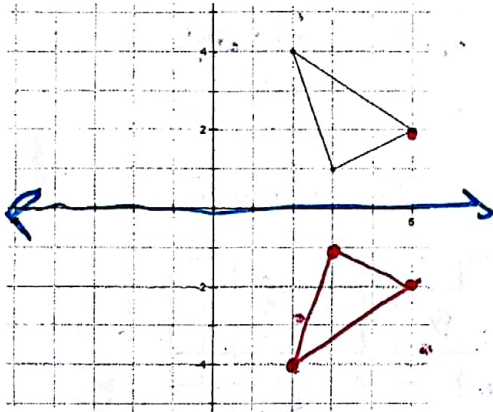


Description:  
 Reflect over  
 y-axis  
 Algebraic Rule:  
 $(x, y) \rightarrow (-x, y)$



Description:  
 Reflection over  
 $x = -3$   
 Algebraic Rule:  
 $(x, y) \rightarrow (? , y)$   
**NO RULE**

9. The points  $(2, 4)$ ,  $(3, 1)$ ,  $(5, 2)$  are reflected with the rule  $(x, y) \rightarrow (x, -y)$ .

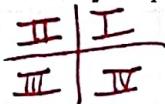


Reflected  
 over x-axis

$K(5, 3)$   $R(-4, 2)$   $P(-2, 1)$   
 $K'(-1, 3)$   $R'(-2, -2)$   $P'(-4, 1)$

$(2, 4) \rightarrow (2, -4)$

10. A polygon lies entirely in quadrant II. In which quadrant will the image lie after a reflection over the line  $y = x$ ?



IV

11. A polygon lies entirely in quadrant I. In which quadrant will the image lie after a reflection over the line  $y = x$ ?



I

12. In the figure below, what is the image of Point A after it is reflected over the line BE?

Point A  $\rightarrow$  Point C

