Geometry 1.2

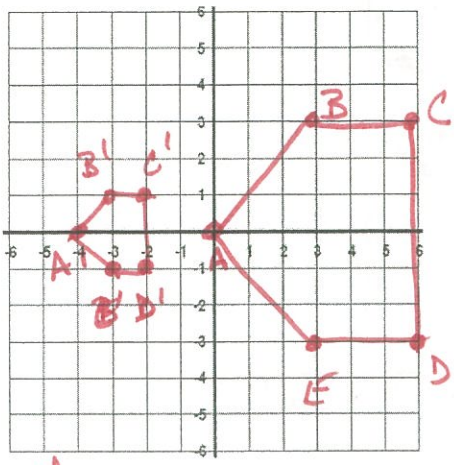
L3 WS#2

Name_____

Geometry Worksheet

Graph the figure and its image on the coordinate plane using the vertices provided. After you have graphed the transformation, describe the type of transformation that has been created.

1.

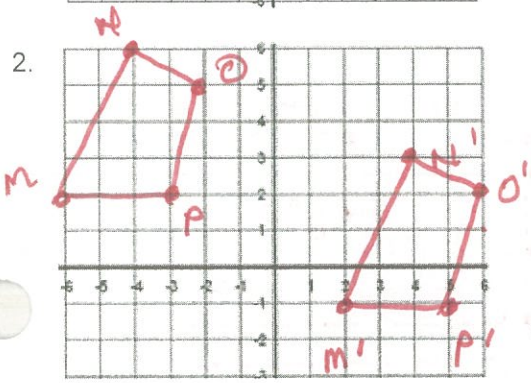


Original	Image
A (0, 0)	A' (-4, 0)
B (3, 3)	B' (-3, 1)
C (6, 3)	C' (-2, 1)
D (6, -3)	D' (-2, -1)
E (3, -3)	E' (-3, -1)

Transformation Type: TRANSLATION & DILATION

Is the transformation Isometric? Why or why not? NO - GOT SMALLER

2.



Original	Image
M (-6, 2)	M' (2, -1)
N (-4, 6)	N' (4, 3)
O (-2, 5)	O' (6, 2)
P (-3, 2)	P' (5, -1)

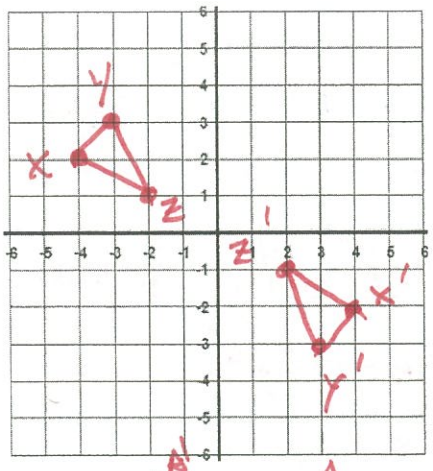
Transformation Type: TRANSLATION

Is the transformation Isometric? YES

Write the rule for the transformation in coordinate notation:

$(x, y) \rightarrow (x+8, y-3)$

3.



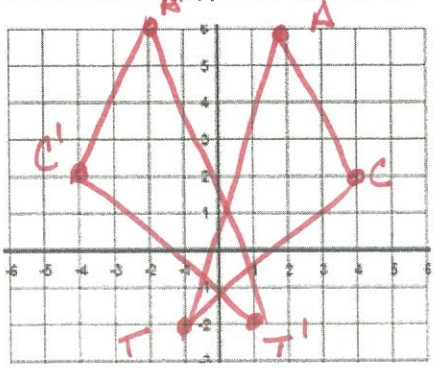
Original	Image
X (-4, 2)	X' (4, -2)
Y (-3, 3)	Y' (3, -3)
Z (-2, 1)	Z' (2, -1)

Transformation Type: ROTATION (180° ABOUT ORIGIN)

Is the transformation Isometric? Why or why not? YES - NO SIZE CHANGE

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

4.



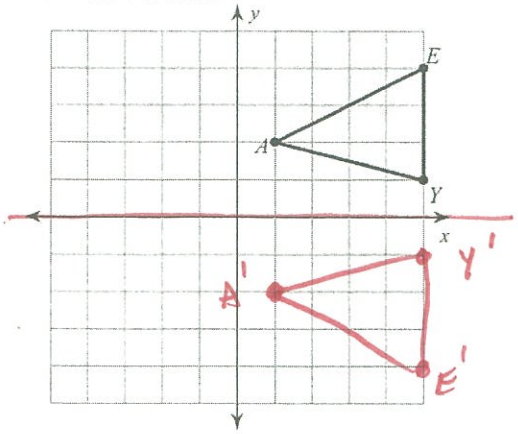
Original	Image
C (4, 2)	C' (-4, 2)
A (2, 6)	A' (-2, 6)
T (-1, -2)	T' (1, -2)

Transformation Type: REFLECTION (OVER Y-AXIS)

Is the transformation Isometric? Why or why not? YES - NO SIZE/SHAPE CHANGE

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

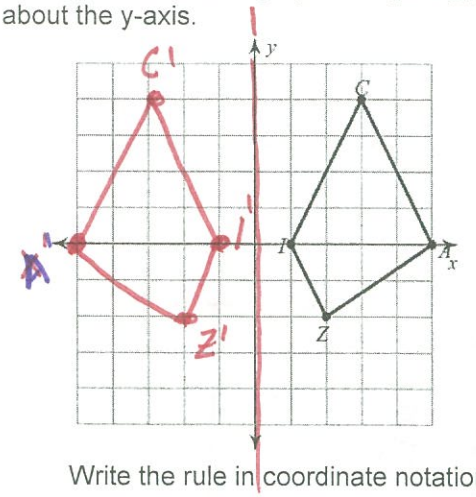
5. Find the vertices and graph the triangle reflected about the x-axis.



Write the rule in coordinate notation:

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

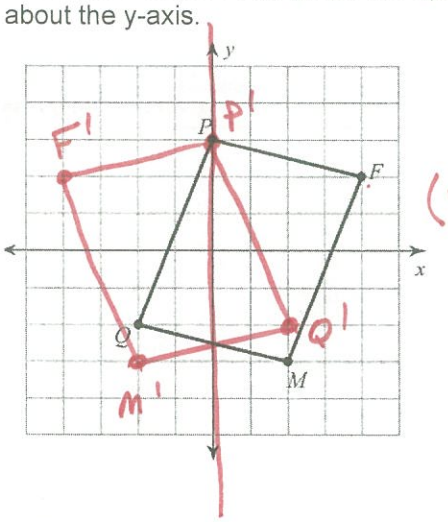
6. Find the vertices and graph the figure reflected about the y-axis.



Write the rule in coordinate notation:

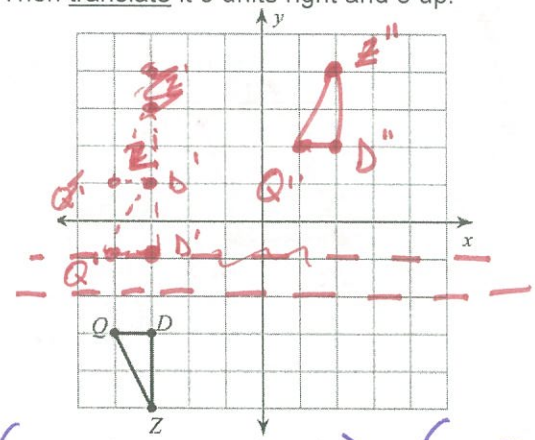
$(x, y) \rightarrow (-x, y)$

7. Find the vertices and graph the figured reflected about the y-axis.



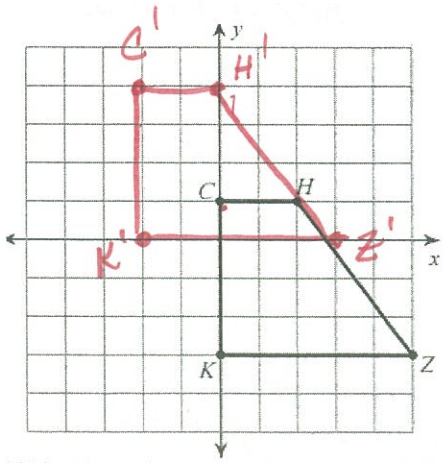
$(x, y) \rightarrow (-x, y)$

8. Reflect the following triangle over y = -2. Then translate it 5 units right and 3 up.



$(x+5, -y-4+3) \rightarrow (x+5, -y-1)$

9. Translate the figure 2 units left and 3 units up



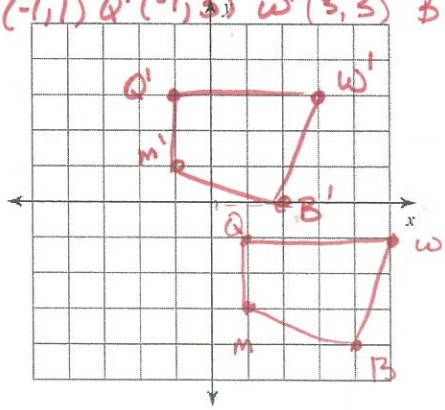
Write the rule in coordinate notation:

$(x, y) \rightarrow (x-2, y+3)$

10. Translate the original coordinates 4 units up and 2 units left

$M(1, -3)$, $Q(1, -1)$, $W(5, -1)$, $B(4, -4)$

$m'(-1,1)$ $Q'(-1,3)$ $w'(3,3)$ $B(2,0)$



Write the rule in coordinate notation:

$(x, y) \rightarrow (x-2, y+4)$