Printout

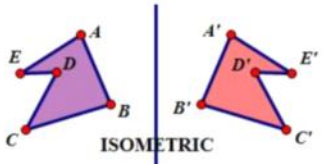
Wednesday, December 7, 2016 11:24 AM

Geo H
Transformations Day 1

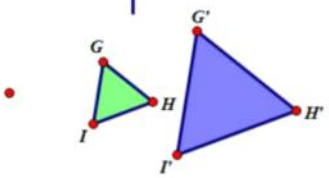
Transformations

Isometries
Preserve size and shape.
• Congruent figures
Reflections, translation, Rotations

Non-Isometry
• Preserve shape.
Dilations



ISOMETRIC



NOT ISOMETRIC

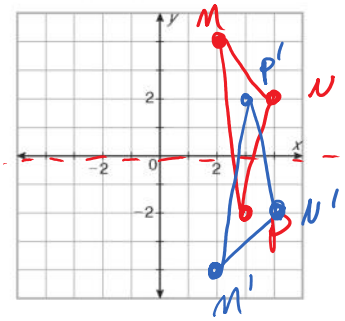
Quads

Reflections in the Coordinate Plane

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

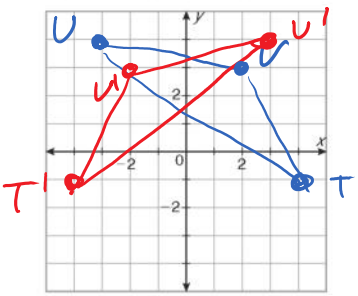
Across x-axis

M (2, 4), N (4, 2), P (3, -2)



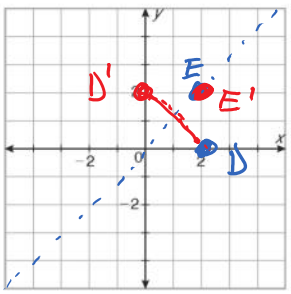
Across y-axis

T (4, -1), U(-3, 4), V (2, 3)



Across y=x

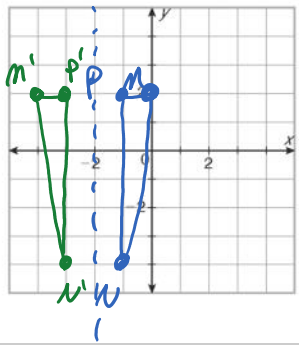
D(2, 0), E(2, 2), F(5, 2), G(5, 1)



Other Reflections in the Coordinate Plane

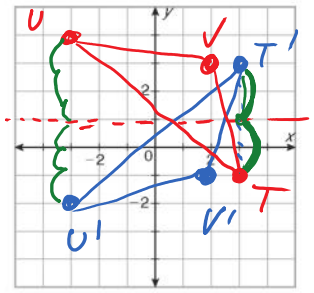
Across x= -2

M (0, 2), N (-1, -4), P (-1, 2)



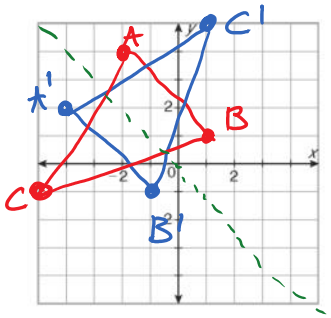
Across y =1

T (4, -1), U(-3, 4), V (2, 3)



Across y= -x

A (-2, 4), B (1, 1), C (-5, -1)

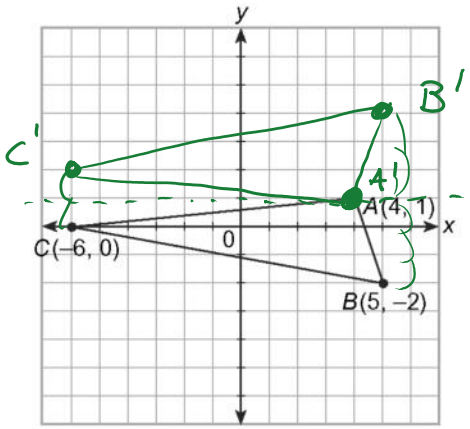


Use the figure at right and $P(x, y) = (x, -y + 2)$.

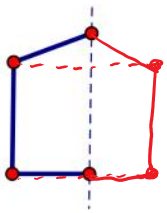
Draw the image of $\triangle ABC$ under $P(x,y)$.

Draw the line of reflection. Then write an equation for it.

$y = 1$



Provided is <u>half</u> of a shape and the line of reflection.



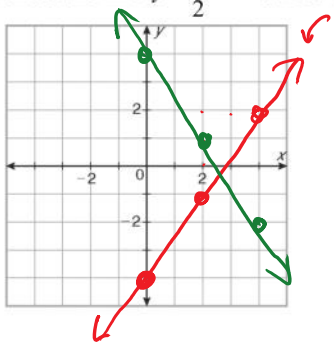
a) Complete drawing the shape.

b) Using dashes marks to show equal sides – label each of the sides to show congruent segments.

c) Do the same for angles, label which angles are congruent.

d) Finally, what do you notice about a shape that has one line of symmetry?

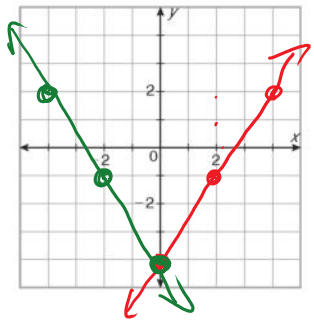
Reflect the line $y = \frac{3}{2}x - 4$ across the x-axis and write the equation for the image.



$m = \frac{-3}{2}$

$y = \frac{-3}{2}x + 4$

Reflect the line $y = \frac{3}{2}x - 4$ across the y-axis and write the equation for the image.



$m = \frac{-3}{2}$

$y = \frac{-3}{2}x - 4$