Section 2.2: Reflections Name: _____

In Class Notes

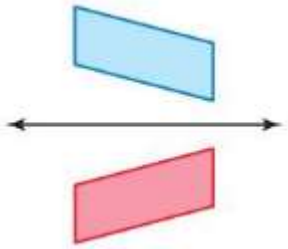
A _____ or _____ is a transformation in which a figure is reflected in a line called

the _____ _____ _____.

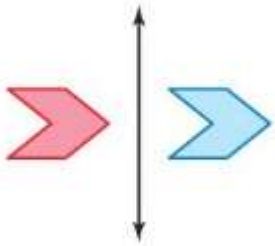
The reflection creates a _____ _____ of the original figure.

Ex:) Tell whether the blue figure is a reflection of the red figure.

a) Notes:

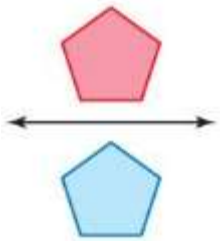


b)

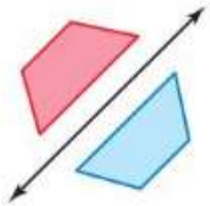


OYO:) Tell whether the blue figure is a reflection of the red figure. Notes:

a)



b)



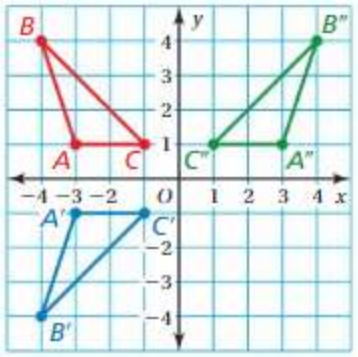
To reflect a figure in the _____ - _____, take the opposite of the _____ - _____.

To reflect a figure in the _____ - _____, take the opposite of the _____ - _____.

Algebra:

Reflection in the x-axis: $(x, y) \rightarrow (x, -y)$

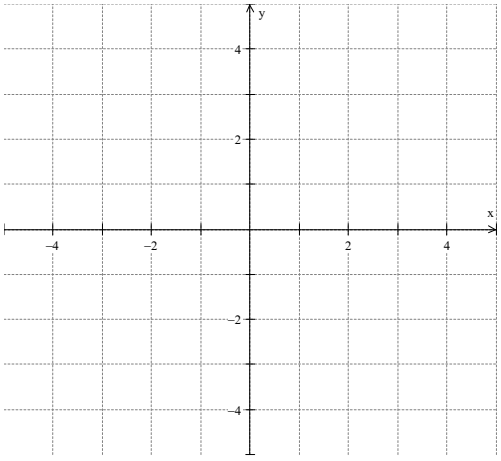
Reflection in the y-axis: $(x, y) \rightarrow (-x, y)$



Ex:) The vertices of a triangle are A(1, 1), B(1, 4), and C(3, 4). Notes:

Draw the figure and its reflection in (a) the x-axis and (b) the y-axis.

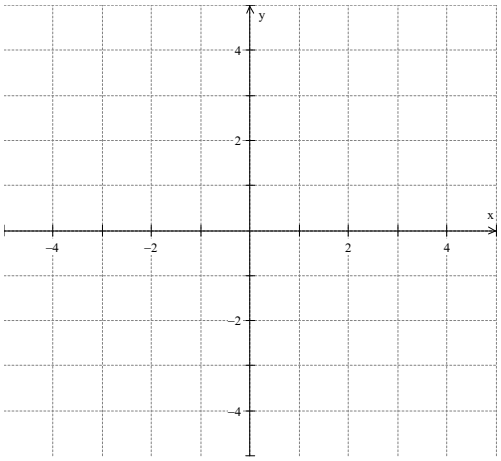
What are the coordinates of the image?



OYO:) The vertices of a rectangle are A(-4,-3), B(-4, -1), C(-1, -1), and D(-1, -3). Notes:

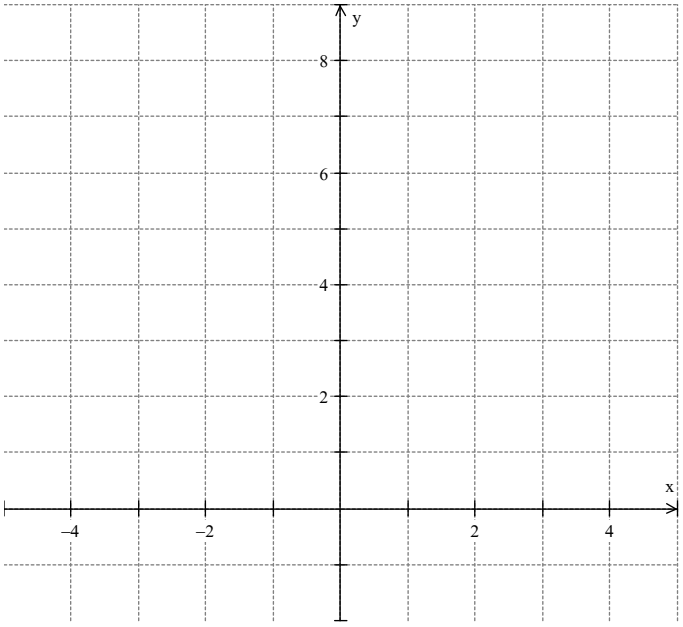
Draw the figure and its reflection in (a) the x-axis and (b) the y-axis.

What are the coordinates of the image?



Ex:) A graphic artist designs a T-shirt using a pentagon with vertices P(0, 0), Q(-2, 0), R(-1, 3), S(-4, 3), and T(0, 7). The artist reflects the pentagon in the y-axis to create the design. Find the coordinates of the reflected image. Then draw the design in the coordinate plane.

Notes:



OYO:) You design a logo using the figure shown. You want both the x-axis and the y-axis to be lines of reflection. Describe how to use reflections to complete the design. Then draw the logo in the coordinate plane.

Notes: