

In this problem, students will draw geometric figures by connecting points on a coordinate grid. By applying algebraic rules for transformations, other geometric figures will be created. You will then determine which figures are similar and which are not, and you will develop a sense for what it means for figures to be similar.

To begin, let's review plotting points on a coordinate grid. A coordinate grid has both an x-axis which runs horizontally and a y-axis which runs vertically. The point where the two axes intersect is called the origin and is labeled as point (0, 0). All points on the x-y coordinate grid are designated as (x, y).

Let's plot a few sample points:

$$(x, y) = (0, 0)$$

$$(x, y) = (5, 0)$$

$$(x, y) = (0, 3)$$

These three points are all ON the axes.

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Plot this point with me: (4, 3)

Plot this point on your own: (2, 5)

Check your point

These two points are in quadrant I

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Plot this point with me: (-3, 2)

Plot this point on your own: (-4, 5)

Check your point

These two points are in quadrant II

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Plot this point with me: (-4, -2)

Plot this point on your own: (-1, -3)

Check your point

These two points are in quadrant III

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Plot this point with me: (5, -3)

Plot this point on your own: (1, -2)

Check your point

These two points are in quadrant IV

This concludes the review on how to plot coordinate points

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