

Coordinate Planes and Algebra – Grade 7 Worksheet

This worksheet will help you connect what you know about coordinate planes to algebra. You will practice using tables of values, graphing points, and recognizing patterns.

1. Fill in the Table of Values

Complete the table for the equation: $y = 2x + 1$

x	-2	-1	0	1	2
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y					
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2. Plot the Points

Use graph paper to plot the points from your table in question 1. Label each point clearly.

3. Describe the Pattern

What pattern do you notice in how the y-values change as x increases? How would you describe the line you see on the graph?

4. Try a New Equation

Now try this equation: $y = x - 3$

x	-2	-1	0	1	2
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y					
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Plot these points on a graph as well.

5. Challenge

Can you come up with your own equation (like $y = 3x$ or $y = -x + 2$)? Make a table of values, plot the points, and describe the pattern you see.

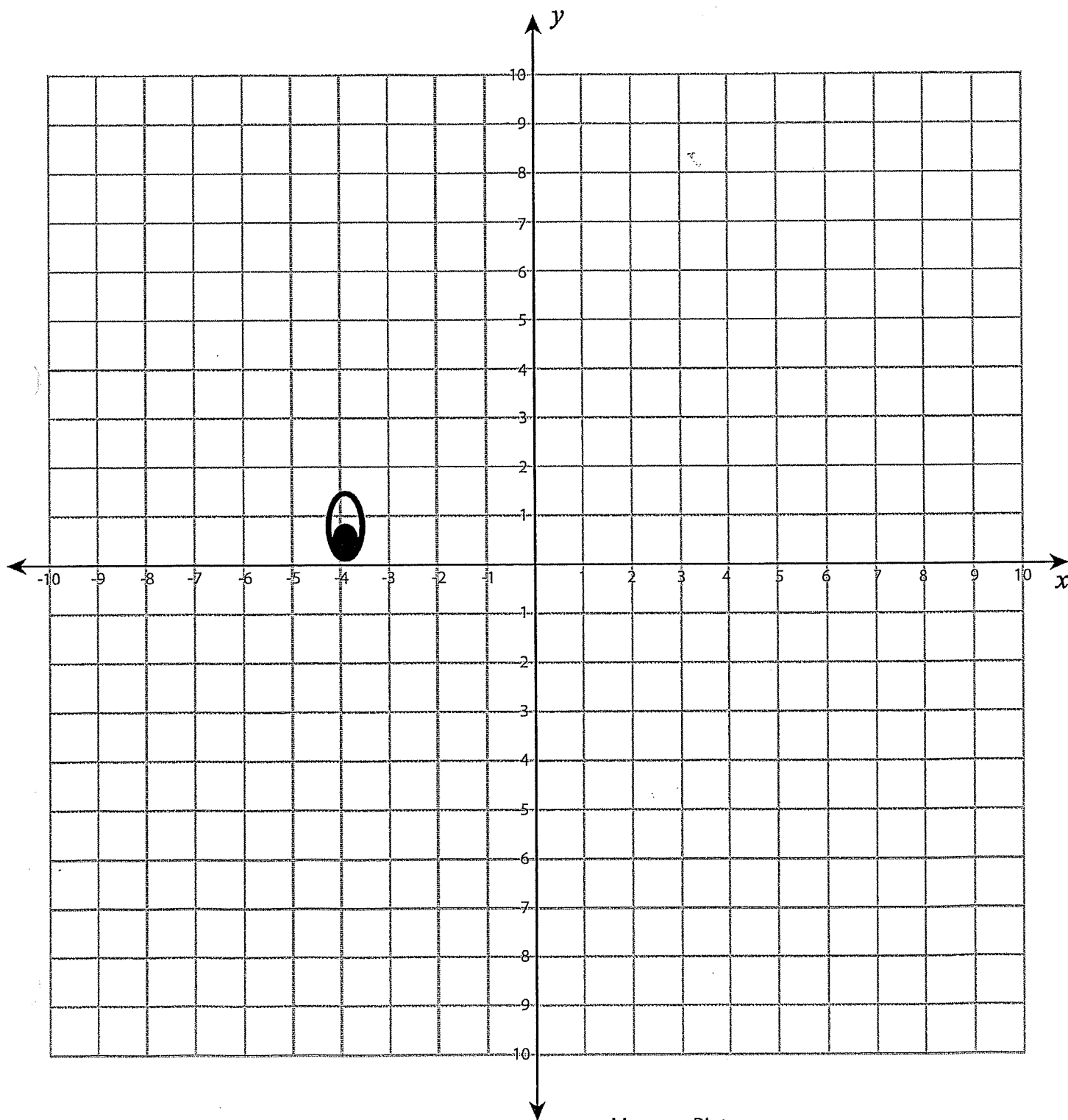
Name : _____

Score : _____

Mystery Picture

Plot and join the points in the given order. Complete the picture by joining the end points.
Identify the mystery picture.

$(-6, 0), (-5, 2), (-3, 3), (-1, 4), (1, 4), (4, 2), (7, 4), (5, 0), (7, -4), (4, -2), (1, -4), (-1, -4), (-3, -3), (-5, -2)$



Mystery Picture :