

Name _____ Date _____

Graphing Linear Functions (Pages 442–444)

A function for which the graphs of the solutions form a straight line is called a **linear function**.

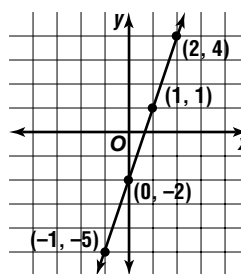
Graphing a Linear Function	To graph a linear function, begin by making a function table. List at least three values for x . Graph each ordered pair. Connect the points with a straight line. Add arrows to the ends of the line to show that the line continues indefinitely.
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EXAMPLE

Graph the function $y = 3x - 2$.

Choose some values for x , and find the matching values for y . Make a table to show the ordered pairs.

x	$y = 3x - 2$	(x, y)
-1	-5	$(-1, -5)$
0	-2	$(0, -2)$
1	1	$(1, 1)$
2	4	$(2, 4)$



Then graph the ordered pairs from your table. Draw the line that joins these points. This line is the graph of $y = 3x - 2$.

Try These Together

1. Graph the function $y = 3x$.

HINT: Make a function table for the x -values of $-1, 0, 1, 2$.

2. Graph the function $y = 6 - x$.

HINT: Make a function table for the x -values of $-1, 0, 2, 6$.

PRACTICE

Graph each function.

3. $y = \frac{x}{2} + 3$

4. $y = x - 10$

5. $y = -x$

6. $y = \frac{1}{2}x + 4$

7. $y = 2x + 3$

8. $y = 5 - 2x$



9. **Standardized Test Practice** If it costs 25 cents to manufacture an eraser, how much would it cost to manufacture 10? Find the ordered pair that would represent this on a linear graph.

A (10, \$2.50)

B (10, \$5)

C (\$2.5, 8)

D (2, \$25)

Answers: 1–8. See Answer Key. 9. A