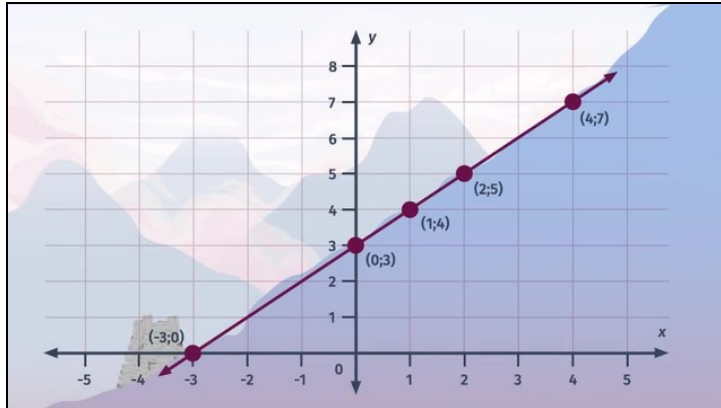




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# The Graph of a Linear Equation in Two Variables



- 1 Identify which table belongs to which graph.
- 2 Complete the table for the equation  $y + \frac{1}{2}x = 5$
- 3 Determine which statements about linear equations are true.
- 4 Find the table which belongs to each linear equation.
- 5 Graph the linear equation  $y - 2x = 2$ .
- 6 Determine which linear equation belongs to each graph.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.



The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



## Identify which table belongs to which graph.

Match the elements.

x	y
1	1
2	2
3	3
4	4

A

x	y
1	1.5
2	3
3	4.5
4	6

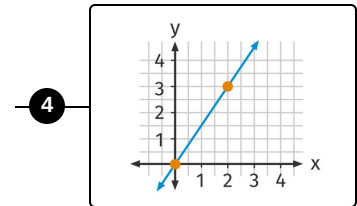
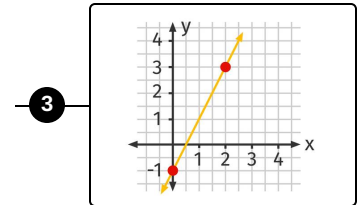
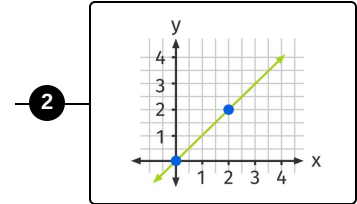
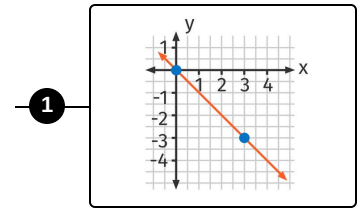
B

x	y
1	-1
2	-2
3	-3
4	-4

C

x	y
1	1
2	3
3	5
4	7

D





## Hints for solving these problems

1  
of 6

### Identify which table belongs to which graph.

#### Hint #1

For each table, every row gives you an ordered pair  $(x, y)$ .

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#### Hint #2

There is one decreasing line; its equation is  $y + x = 0$ .

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#### Hint #3

The other equations are

- $y - x = 0$
  - $y - 1.5x = 0$
  - $y - 2x = -1$
-



## Answers and detailed answer explanations for these problems

1  
of 6

### Identify which table belongs to which graph.

**Answer key:** A—2 // B—4 // C—1 // D—3

Each row of a table gives you an ordered pair  $(x, y)$ . We can plot these points on the coordinate plane as follows:

- Draw a line parallel to the  $y$ -axis that passes through the  $x$ -coordinate of  $(x, 0)$ .
- Draw a line parallel to the  $x$ -axis that passes through the  $y$ -coordinate of  $(0, y)$ .
- The intersection of those lines is the point  $(x, y)$ .

Once you have plotted all of the points from the table, if you notice that they all lie on a line, you can connect all of the points to form this line.

We get the following lines:

- The first table belongs to the green line. The corresponding equation is given by  $y - x = 0$ .
- The second table belongs to the blue line and its equation is  $y - 1.5x = 0$ .
- The third table belongs to the red line and is represented by the linear equation  $y + x = 0$ .
- The fourth table belongs to the yellow line. The corresponding equation is given by  $y - 2x = -1$ .