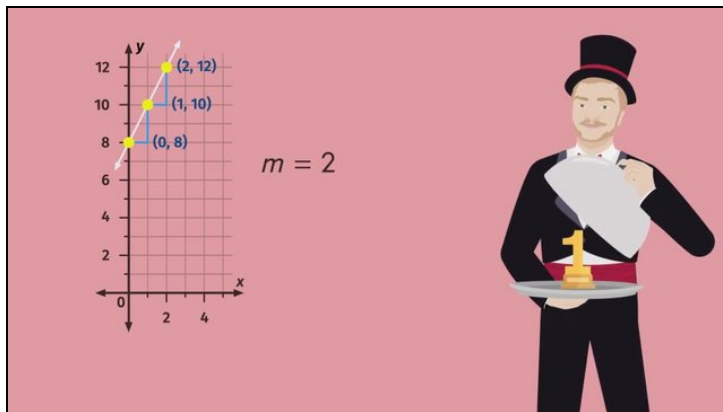




Printable Worksheets from [sofatutor.com](https://www.sofatutor.com)

One Point, One Slope, One Line



- 1 **Determining which points lie on which lines.**
- 2 Find the equation for the corresponding line given a point and a slope.
- 3 Given a point and a slope, graph the resulting line.
- 4 Write the equation of the resulting line given a point and a slope.
- 5 Determine a line from a given point and slope.
- 6 Prove that given a slope and point, there's only one line with that slope passing through that point.
- + 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.



Determining which points lie on which lines.

Find and match the points that are on the graph of each equation.

$y = 2x - 7$	A	1	$(0, -14)$
$y = 7x$	B	2	$(7, 0)$
$y = -\frac{1}{7}x + 7$	C	3	$(0, 0)$
$y = -\frac{1}{7}x + 1$	D	4	$(0, -7)$
$y = 7x - 14$	E	5	$(0, 7)$



Hints for solving these problems

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of 6

Determining which points lie on which lines.

Hint #1

Given the equation $y = mx + b$:

- The slope is m .
 - The y -intercept is b .
 - The point $(0, b)$ is on the graph of the line.
-

Hint #2

Given the line $y = -\frac{1}{6}x + 10$:

- The y -intercept is 10.
 - The point $(0, 10)$ is on the line.
 - The slope is $-\frac{1}{6}$.
 - The rise is -1 and the run is 6.
 - From the point $(0, 10)$, we can run 6 and "rise" -1 .
 - This gives us the point $(6, 9)$, which is also on the line.
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Hint #3

Suppose we are given the line $y = \frac{1}{3}x + 11$ and a point $(3, 12)$ which we **don't know** is on the line or not.

We can substitute the point in for x and y in the equation. If the result is true, the point **is** on the line.

$$12 = \frac{1}{3}(3) + 11$$

$$12 = 1 + 11$$

$$12 = 12$$

That's true, so the point $(3, 12)$ is on the graph of the line $y = \frac{1}{3}x + 11$.



Answers and detailed answer explanations for these problems

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of 6

Determining which points lie on which lines.

Answer key: A—4 // B—3 // C—5 // D—2 // E—1

$y = mx + b$	slope	y-int.	points
$y = 2x - 7$	$2 = \frac{2}{1}$	-7	(0, -7)
$y = 7x$	$7 = \frac{7}{1}$	0	(0, 0)
$y = \frac{1}{7}x + 7$	$\frac{1}{7}$	7	(0, 7)
$y = -\frac{1}{7}x + 1$	$-\frac{1}{7}$	1	(0, 1) (7, 0)
$y = 7x - 14$	$7 = \frac{7}{1}$	-14	(0, -14)