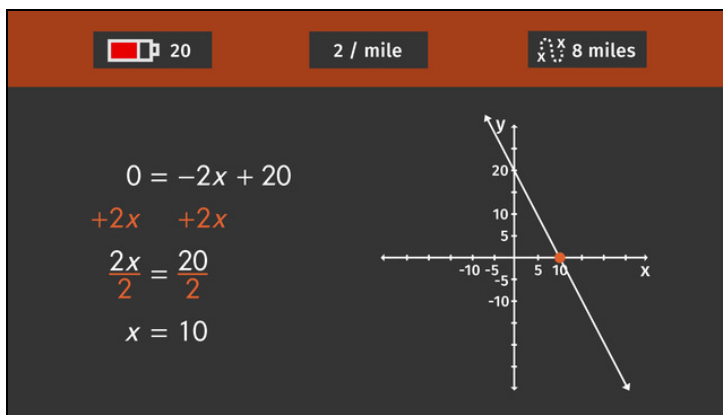




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# Slope-Intercept Form



- 1 Decide which equations are in slope-intercept form.
- 2 Describe the effects of changing  $m$  or  $b$ .
- 3 Decide whether or not the Mars rover has enough battery power left to drive eight miles.
- 4 Determine the lines and corresponding equations.
- 5 Determine the equations which describe the Mars rover's expedition.
- 6 Determine the correct equation for the given points.
- + 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.



## Decide which equations are in slope-intercept form.

Choose equations in the correct form.

**A**

$$y = -2x + 20$$

☐

**B**

$$y - 10 = -2(x - 5)$$

☐

**C**

$$m = \frac{\Delta y}{\Delta x}$$

☐

**D**

$$y = mx + b$$

☐

**E**

$$y = 2x + 1$$

☐



## Hints for solving these problems

1  
of 6

### Decide which equations are in slope-intercept form.

#### Hint #1

The slope indicates the steepness of the line.

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#### Hint #2

The y-intercept is the point where the line crosses the y-axis.

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#### Hint #3

The point-slope-form is:

$$y - y_1 = m(x - x_1).$$

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## Answers and detailed answer explanations for these problems

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of 6

### Decide which equations are in slope-intercept form.

**Answer key:** A, D, E

The slope-intercept form is:

$y = mx + b$ , where

- $m$  is the slope. The greater the absolute value of the slope, the steeper the line.
- $b$  is the y-intercept, the point where the line crosses the y-axis.
- $y = -2x + 20$  and  $y = 2x + 1$  are in slope-intercept form.
- $y - 10 = -2(x - 5)$  is the point-slope form of  $y = -2x + 20$ .
- $m = \frac{\Delta y}{\Delta x}$  is the slope.