math Antics Exercises

Name: _____

Date: _____

Basic Linear Functions

1 Fill in the blank.

In the equation $y = mx + b$,
'm' is the slope of the line
and 'b' is the y-intercept.

2 What are the slopes of these linear functions?

$y = 4x - 3$: 4

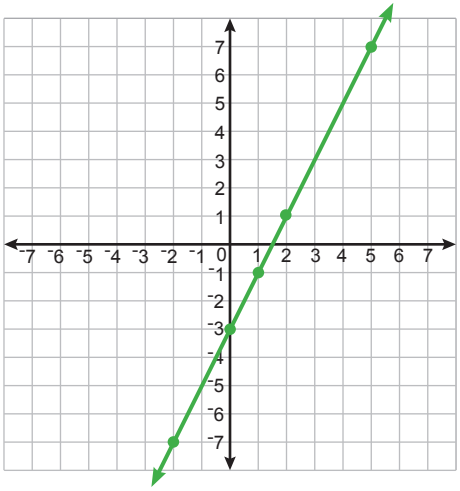
$y = \frac{-1}{3}x$: $\frac{-1}{3}$

3 Complete the table for this linear function.

$$y = 2x - 3$$

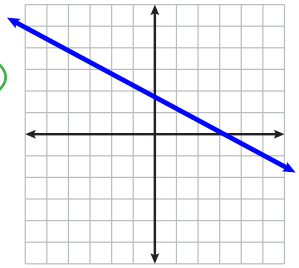
Input x	Output y
5	7
2	1
1	-1
0	-3
-2	-7

4 Graph the function from problem 3



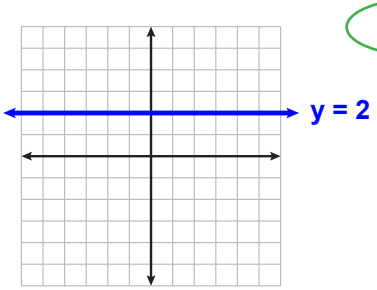
5 Does this line have a positive or a negative slope?

Negative



6 What is the slope of this line?

Zero



7 Find the slope and y-intercept of this linear function.
(Hint: rearrange into y = mx + b form.)

$$2(x - 3) = y + 1$$

$2x - 6 = y + 1$
$\quad -1 \qquad -1$

$2x - 7 = y$

or $y = 2x - 7$

Slope = 2
y-intercept = -7

8 Find the slope and y-intercept of this linear function.
(Hint: rearrange into y = mx + b form.)

$$2x + x = 4(y - 1)$$

$\frac{3x}{4} = \frac{4(y - 1)}{4}$

$\frac{3}{4}x = y - 1$
$\quad +1 \qquad +1$

$y = \frac{3}{4}x + 1$

Slope = $\frac{3}{4}$
y-intercept = 1

See Video for step-by-step solutions to each problem.

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