

Name: _____

SLOPE-INTERCEPT FORM $y = m x + b$

Date: _____ Hour: _____

m is the _____

b is the _____

Write the equation of a line given the slope and y-intercept.

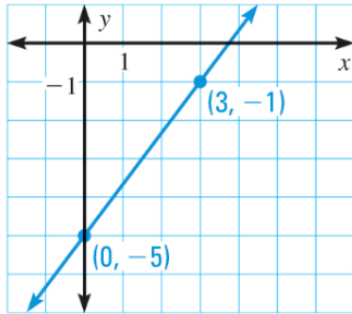
Write the equation of the line with the given slope and y-intercept.

1) Slope is -2 and a y-intercept of 5

2) Slope is $\frac{3}{4}$ and y-intercept is -3

Write the equation of a line in slope intercept form given a graph.

3)

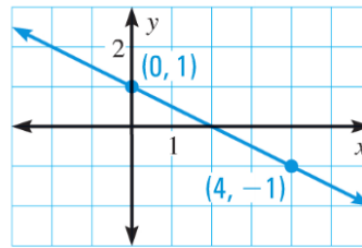


Slope: _____

Y-Intercept: _____

Equation: _____

4)



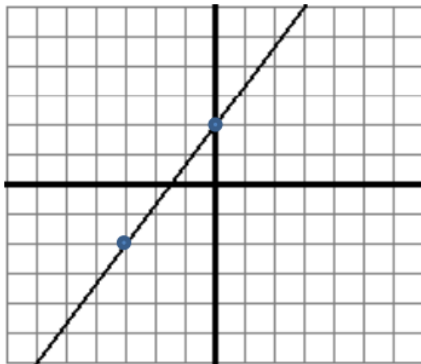
Slope: _____

Y-Intercept: _____

Equation: _____

Examples: Write the linear equation for the graph shown.

5)

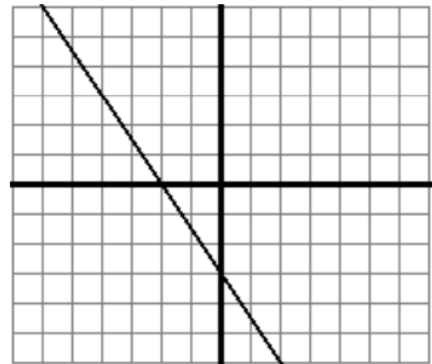


Slope: _____

Y-Intercept: _____

Equation: _____

6)



Slope: _____

Y-Intercept: _____

Equation: _____

Write the equation of a line in slope intercept form **given a table.**

1st: find the slope

| x | y |
|----|----|
| -2 | -3 |
| -1 | -1 |
| 0 | 1 |
| 1 | 3 |
| 2 | 5 |

Find the slope by: $\frac{\text{Change in } y}{\text{Change in } x}$

$m =$ _____

Example:

| x | y |
|----|-----|
| -2 | 4 |
| -1 | 3.5 |
| 0 | 3 |
| 1 | 2.5 |
| 2 | 2 |

Slope = _____

Example:

| x | y |
|----|-----|
| -5 | -16 |
| -2 | -7 |
| 0 | -1 |
| 3 | 8 |
| 5 | 14 |

Slope = _____

2nd: find the y-intercept

The y-intercept is when $x =$ _____

Example:

| x | y |
|----|----|
| -2 | -3 |
| -1 | -1 |
| 0 | 1 |
| 1 | 3 |
| 2 | 5 |

y- intercept

$b =$ _____

Example:

| x | y |
|----|-----|
| -2 | 4 |
| -1 | 3.5 |
| 0 | 3 |
| 1 | 2.5 |
| 2 | 2 |

y- intercept

$b =$ _____

Example:

| x | y |
|----|-----|
| -5 | -16 |
| -2 | -7 |
| 0 | -1 |
| 3 | 8 |
| 5 | 14 |

y- intercept

$b =$ _____

What should you do if 0 is not in the table?

| x | y |
|---|----|
| 1 | 11 |
| 2 | 15 |
| 3 | 19 |
| 4 | 23 |
| 5 | 27 |

Use the substitution method

1. Find the **slope** $m = \underline{\hspace{2cm}}$
2. Fill in the m (slope) into $y = m x + b$ $y = \underline{\hspace{1cm}} x + b$
3. Choose an ordered pair, then substitute in the x and y ... now you have to **solve for b** (y - intercept), so get your b alone.

$m = \underline{\hspace{2cm}}$

$b = \underline{\hspace{2cm}}$

3rd: put it
all
together

| x | y |
|----|----|
| -1 | -6 |
| 0 | -4 |
| 1 | -2 |
| 2 | 0 |
| 3 | 2 |

Write a linear equation for the tables shown. $y = m x + b$

1. Find the m **slope**
2. Find the b **y - intercept**
3. Plug the m and b into your slope intercept form.... $y = m x + b$
Plug in the m and b $y = \underline{\hspace{1cm}} x + \underline{\hspace{1cm}}$

Equation $\underline{\hspace{10cm}}$