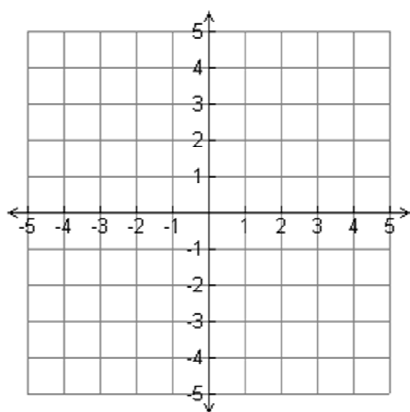


# 5.1 Write Linear Equations in Slope-Intercept Form

Recall that the graph of an equation in slope-intercept form,  $y = mx + b$ , is a line with a slope of  $m$  and a  $y$ -intercept of  $b$ . You can use this form to write an equation of a line if you know its slope and  $y$ -intercept.



**Skill #1:** Write an equation of the line given a slope and a  $y$ -intercept.

## **EXAMPLE 1** Use slope and $y$ -intercept to write an equation

Write an equation of the line with a slope of  $-2$  and a  $y$ -intercept of  $5$ .

## 5.1 Blank Notes\_Large

### Your Turn !

#### You Try: Skill #1

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

Slope is  $\frac{3}{4}$ ; y-intercept is  $-3$ .

Don't forget to show your work and write down your answer !

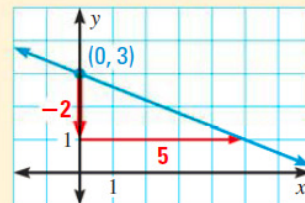
**Skill #2:** Write an equation of the line given a graph with a clear slope and a y-intercept.

#### EXAMPLE 2 Standardized Test Practice

Which equation represents the line shown?

(A)  $y = -\frac{2}{5}x + 3$     (B)  $y = -\frac{5}{2}x + 3$

S ..... → (C)  $y = -\frac{2}{5}x + 1$     (D)  $y = 3x + \frac{2}{5}$

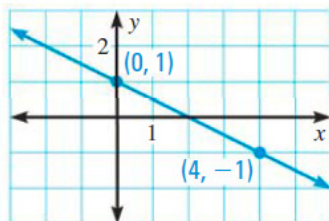


## 5.1 Blank Notes\_Large

### Your Turn !

#### You Try: Skill #2

Write an equation of the line shown.

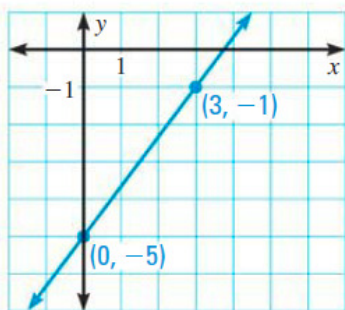


Don't forget to show your work and write down your answer !

**Skill #3:** Write an equation of the line given two points with one of them being a y-intercept.

#### **EXAMPLE 3** Write an equation of a line given two points

Write an equation of the line shown.



## 5.1 Blank Notes\_Large

### Your Turn !

**You Try:** Skill #3

Write an equation of the line that passes through the given points.

$$(2, -4), (0, -4)$$

Don't forget to show your work and write down your answer !

**Skill #4:** Write an equation of the line given two points in function notation with one of them being a y-intercept.

#### **EXAMPLE 4** Write a linear function

... Write an equation for the linear function  $f$  with the values  $f(0) = 5$  and  $f(4) = 17$ .

## 5.1 Blank Notes\_Large

### Your Turn !

**You Try:** Skill #4

Write an equation for the linear function  $f$  with the given values.

$$f(-3) = 6, f(0) = 5$$

Don't forget to show your work and write down your answer !

**Skill #5:** Apply concept of rate and initial condition in a word problem to an equation.

**We will come back to work with word problems !**

**Please Don't Forget to Enter Your Answers for the "You Try" examples in the form below!**