

5.1: Write Linear Equations in Slope – Intercept Form (REG)

- Goals:**
- *Write an equation in slope – intercept form given slope and y – int.
 - *Write an equation in slope – intercept form given two points
 - *Write an equation in slope – intercept form given two function values
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Slope – intercept form:

Situation 1: Write the equation of a line in slope – intercept form if given slope and the y – intercept

Ex:
Slope: -2
 y – intercept: 5

Ex:
Slope: 8
 y – intercept: -7

Ex:
Slope: 4
 y – intercept: -3

Ex:
Slope: $\frac{3}{4}$
 y – intercept: -3

Ex:
Slope: 0
 y – intercept: 5

Ex:
Slope: -1
 y – intercept: 0

Situation 2: Write the equation of a line in slope – intercept form if given two points on the line

1.

Ex: $(0, -5)$ $(3, -1)$

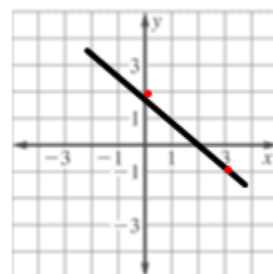
2.

3.

Ex: $(0, 2)$ $(4, -1)$

Ex: $(0, 1)$ $(4, -1)$

Ex:



Ex: (0, 5), (4, 17)

Ex: (0, -2), (8, 4)

Ex: (-3, 6), (0, 5)

Ex: (0, 7), (3, 1)

Real – world connection: $y = mx + b$

*In the real world, $m =$
and $b =$

Imagine you are babysitting and getting paid \$12 an hour, but the family also leaves \$20 for a pizza for dinner. What does the 12 represent and what does the 20 represent?

Ex: A recording studio charges musicians an initial fee of \$50 to record an album. Studio time costs an additional \$35 per hour.

- a) Write an equation that gives the total cost to record an album as a function of studio time needed.

- b) Find the total cost to make an album that takes 10 hours to record.

Ex: A dance studio charges \$20 to use the facility and \$25 per hour of instruction.

- a) Write an equation that gives the total cost as a function of hours of dance instruction.

- b) Find the total cost for 2 hours of dance instruction.