Common Math 10
Lesson 6.4 ~ Slope-Intercept Form of the Equation for a Linear Function

Slope-Intercept form is the first of three forms of an equation for a linear function that we will look at.

\[ y = mx + b \]

slope \hspace{1cm} y - intercept

Example #1: Write an equation for a linear function with slope \(-\frac{7}{3}\) and y-intercept 5.

\[
\begin{align*}
  m &= -\frac{7}{3} \\
  b &= 5
\end{align*}
\]

\[
y = -\frac{7}{3}x + 5
\]

Example #2: Graph the linear function with equation \(y = -\frac{3}{4}x + 2\).

Example #3: Write an equation to describe this function.

\[
\begin{align*}
  m &= \frac{\text{rise}}{\text{run}} = 2 \\
  b &= -3
\end{align*}
\]

\[
y = 2x - 3
\]