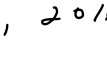
October 10, 2016

* Finding the Equation of a line given two Points written in Slope-Intercept form: $y = mx + b$

Oct 10-9:05 AM

$(-3, -5)$ & $(7, -4)$

Steps

① 

② $m = \frac{(-4)-(-5)}{(7)-(-3)} = \frac{-4+5}{7+3} = \frac{1}{10}$

③ use $y = mx + b$

$-5 = \frac{1}{10}\cdot\left(\frac{-3}{1}\right) + b$ * Solving for "b"

(a) $10\left(-5 = -\frac{3}{10} + b\right)$

$-50 = -3 + 10b$

$\frac{-47}{10} = \frac{10b}{10}$

$-\frac{47}{10} = b$

(b) $-5 = \frac{1}{10}(-3) + b$

$-5 = -\frac{3}{10} + b$

$+\frac{3}{10} \quad +\frac{3}{10}$

$-\frac{5}{1} + \frac{3}{10} = b$

$\frac{-50+3}{10} = b$

$-\frac{47}{10} = b$

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④ write the Equation

$m = \frac{1}{10}$

$b = -\frac{47}{10}$

$\boxed{y = \frac{1}{10}x - \frac{47}{10}}$ ✓

⑤ Check

$-4 = \frac{1}{10}(7) - \frac{47}{10}$

$-4 = \frac{7}{10} - \frac{47}{10}$

$= \frac{7-47}{10}$

$= -\frac{40}{10}$

$-4 = -4$ ✓

Oct 10-9:20 AM

Forms of Linear Equations

① Standard: $Ax + By = C$

* A, B, & C are written as Integers.

② Slope-Intercept: $y = mx + b$

③ Point-Slope: $y - y_1 = m(x - x_1)$

Oct 10-9:24 AM

$(-9, 5)$ & $(7, -10)$

Oct 10-9:31 AM

3.1 ✓

3.3 Do

3.4 Start

Oct 10-9:50 AM