

October 10, 2016
 ✓ 3.1 Completed (collected)
 * { 3.3 slope
 3.4 Eq.

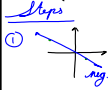
Oct 10-9:58 AM

3.4 Finding the equation of a line given two points written slope-intercept form.

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$(-12, 5)$ & $(6, -3)$

Slope

① 

② $m = \frac{(-3) - (5)}{(6) - (-12)}$
 $= \frac{-3 - 5}{6 + 12}$
 $= \frac{-8}{18} = -\frac{4}{9}$

③ Use $y = mx + b$
 $5 = -\frac{4}{9}(-12) + b$
 solve for "b"

④ $9(5) = \frac{48}{9} + b$
 $45 = 48 + 9b$
 $-\frac{3}{9} = \frac{9b}{9}$
 $-\frac{1}{3} = b$

⑤ $5 = -\frac{4}{9}(-12) + b$
 $5 = \frac{48}{9} + b$
 $\frac{5}{1} - \frac{48}{9} = b$
 $\frac{45 - 48}{9} = b$
 $-\frac{3}{9} = b$
 $-\frac{1}{3} = b$

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④ write Eq.
 $m = -\frac{4}{9}$
 $b = -\frac{1}{3}$

$y = -\frac{4}{9}x - \frac{1}{3}$ ✓

⑤ Check
 $-3 = -\frac{4}{9}\left(\frac{6}{1}\right) - \frac{1}{3}$
 $-3 = -\frac{8}{3} - \frac{1}{3}$
 $= \frac{-8-1}{3}$
 $= -\frac{9}{3}$
 $-3 = -3$ ✓

Oct 10-10:20 AM

Forms of a Linear Equation

① Standard
 $Ax + By = C$
 * where A, B, & C are Integers.

② Slope-Intercept
 $y = mx + b$

③ Point-Slope
 $y - y_1 = m(x - x_1)$

Oct 10-10:24 AM

$(-\frac{7}{8}, 2)$ & $(\frac{1}{3}, -5)$

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