

July 1, 2015
 * Exam #1 - Tomorrow
 Be on Time!

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$(-3, 5); m = -\frac{5}{7}$
 Use $y = mx + b$
 find "b" solve for b
 $5 = (-\frac{5}{7} \cdot -3) + b$
 $5 = \frac{15}{7} + b$
 $5 - \frac{15}{7} = b$
 $\frac{35}{7} - \frac{15}{7} = b$
 $\frac{20}{7} = b$
 $y = -\frac{5}{7}x + \frac{20}{7}$
 $5 = -\frac{5}{7}(-3) + \frac{20}{7}$
 $5 = \frac{15}{7} + \frac{20}{7}$
 $5 = \frac{35}{7}$
 $5 = 5$
 Check using $m = -\frac{5}{7}$ & $(-3, 5)$
 $0 = -\frac{5}{7}(-3) + \frac{20}{7}$
 $0 = \frac{15}{7} + \frac{20}{7}$
 $0 = \frac{35}{7}$
 $0 = 5$
 $(4, 0)$ x-int

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$(8, -9); m = \frac{3}{11}$
 Find the equation using $y = mx + b$ form.
 $-9 = (\frac{3}{11} \cdot 8) + b$ solve for b
 $-9 = \frac{24}{11} + b$
 $-\frac{9}{1} - \frac{24}{11} = b$
 $-\frac{99}{11} - \frac{24}{11} = b$
 $-\frac{123}{11} = b$
 $y = \frac{3}{11}x - \frac{123}{11}$

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$(-11, 3) \neq (2, -5)$
 Use $y = mx + b$
 ① ② $m = \frac{(-5) - (3)}{(2) - (-11)}$
 $= \frac{-8}{13}$
 ③ find "b"
 $-5 = (-\frac{8}{13} \cdot 2) + b$
 $-5 = -\frac{16}{13} + b$
 $-\frac{5}{1} + \frac{16}{13} = b$
 $-\frac{65}{13} + \frac{16}{13} = b$
 $-\frac{49}{13} = b$
 $y = -\frac{8}{13}x - \frac{49}{13}$
 Check
 $3 = (-\frac{8}{13} \cdot -11) - \frac{49}{13}$
 $3 = \frac{88}{13} - \frac{49}{13}$
 $3 = \frac{88-49}{13}$
 $3 = \frac{39}{13}$
 $3 = 3$

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$(7, -3) \neq (-17, 6)$
 ① ② $m = \frac{(6) - (-3)}{(-17) - (7)}$
 $= \frac{9}{-24} = -\frac{3}{8}$
 ③ $-3 = (-\frac{3}{8} \cdot 7) + b$
 $-3 = -\frac{63}{24} + b$
 $-\frac{3}{1} + \frac{63}{24} = b$
 $-\frac{72}{24} + \frac{63}{24} = b$
 $-\frac{9}{24} = b$
 $6 = (-\frac{3}{8} \cdot -17) - \frac{9}{24}$
 $= \frac{51}{8} - \frac{9}{24}$
 $= \frac{153-9}{24}$
 $6 = \frac{144}{24}$
 $6 = 6$

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$(-\frac{1}{2}, \frac{3}{4}) \neq (\frac{5}{8}, -4)$
 ① ② $m = \frac{(-4) - (\frac{3}{4})}{(\frac{5}{8}) - (-\frac{1}{2})}$
 $= \frac{-\frac{16}{4} - \frac{3}{4}}{\frac{14}{8}}$
 $= \frac{-\frac{19}{4}}{\frac{7}{4}}$
 $= -\frac{19}{7}$
 $m = -\frac{399}{68}$
 ③ $\frac{3}{4} = (-\frac{399}{68} \cdot -\frac{1}{2}) + b$
 $\frac{3}{4} = \frac{399}{68} + b$
 $\frac{3}{4} - \frac{399}{68} = b$
 $\frac{51-399}{68} = b$
 $-\frac{348}{68} = b$
 $-\frac{6}{68} = b$
 $y = -\frac{399}{68}x - \frac{6}{68}$
 Check $(\frac{5}{8}, -4)$

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