Writing the Equation of a Line

Standard	Y-form
$Ax+By=C$	$y=mx+b$
$3x+4y=8$	$y=3x+7$
$m(x_2-x_1)=(y_2-y_1)$	$m=$ slope
Slope-point	$b=$ y-int

$y = mx + b$

$m = -2$

$b = -1$

$y = -2x - 1$

$y = 2x - 3$ (+ -3)

$y = 3x - 2$

$m = -2$ $(5, 1)$

$b = 11$

$y = mx + b$

$1 = -2(5) + b$

$1 = -10 + b$

$+10 \quad +10$

$11 = b$

$Y = mx + b$

$Y = -2x + 11$

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$y = mx + b$

$m = 3$

$6 = 3(1) + b$

$6 = 3 + b$

$-3 \quad -3$

$b = 3$

$y = 3x + 5$ $(1, 6)$

$y = 3x + 3$

$y = mx + b$

$m = 4$ $(1, -2)$ $y = 4x - 6$

$-4x \quad -4x$

Substitute to get into $Ax + By = C$

$-2 = 4(1) + b$

$-2 = 4 + b$

$-4 \quad -4$

$-6 = b$

$-4x + y = -6$

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(4,7) (1,4)

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = .1$

$\frac{7-4}{4-1} = \frac{3}{3} = 1$

$b = 3$

$y = mx + b$

$4 = 1(1) + b$

$4 = 1 + b$

$3 = b$

$7 = 1(4) + b$

$7 = 4 + b$

$3 = b$

$y = x + 3$

$-x + y = 3$

(6,-1) (8,3)

$\frac{-1-3}{6-8} = \frac{-4}{-2} = 2$

$m = 2$

$b =$

$-1 = 6(2) + b$

$-1 = 12 + b$

$b = -13$

$y = 2x - 13$

$-2x \quad -2x$

$-2x + y = -13$

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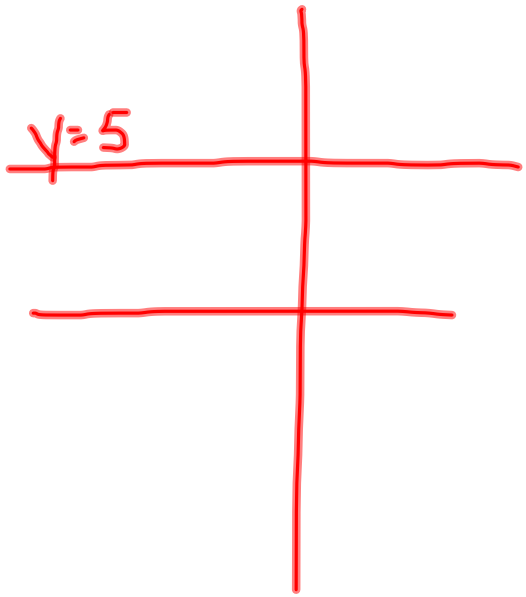

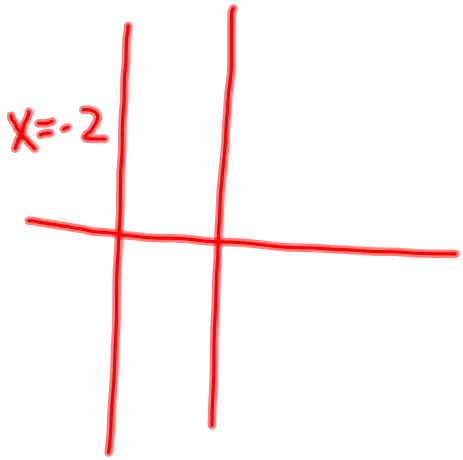

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$$y = 7000(1+.08)^4$$

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