

Chapter 6 Review

Note Title

1/18/2012

$$\textcircled{1} \text{ Slope} = m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{rise}}{\text{run}}$$

$$\begin{matrix} (5, -4), (2, -1) \\ x_1 \ y_1 \quad x_2 \ y_2 \end{matrix}$$

$$m = \frac{-1 - (-4)}{2 - 5}$$

$$m = \frac{3}{-3} \quad \text{so } m = -1$$

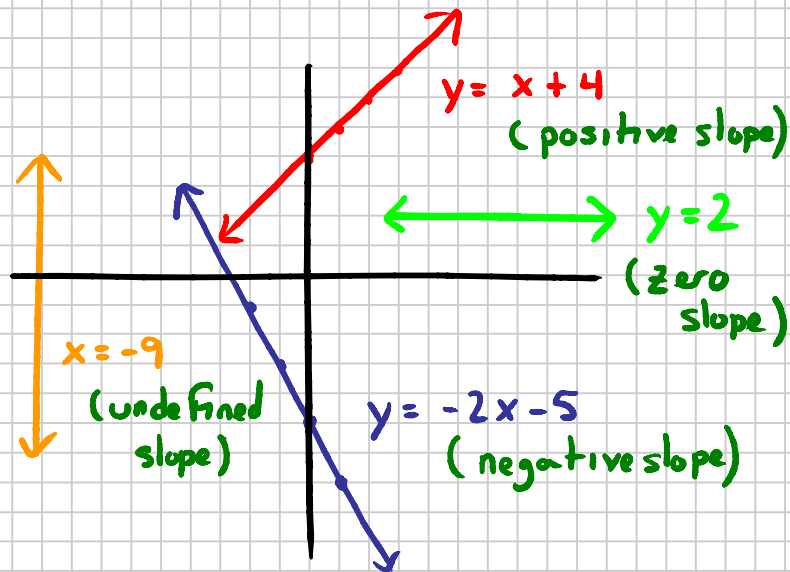
$\textcircled{2}$ Parallel Lines - same slope

Perpendicular Lines - negative reciprocal

$$\frac{2}{3} \parallel \frac{4}{6}$$

$$\frac{2}{3} \perp -\frac{3}{2}$$

$\textcircled{3}$



④ Slope Intercept Form $y = mx + b$

where $m = \text{slope}$

$b = \text{y-intercept}$

⑤ Slope-Point Form $y - y_1 = m(x - x_1)$

where $m = \text{slope}$

$(x_1, y_1) = \text{point on graph}$

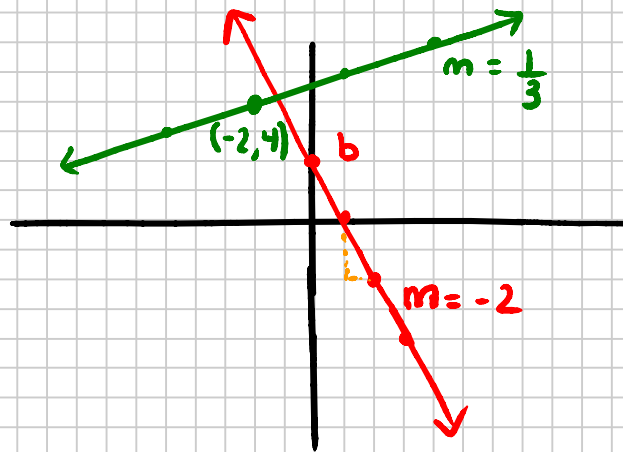
⑥ General Form $Ax + By + C = 0$

where: $-\frac{A}{B} = \text{slope}$

$-\frac{C}{B} = \text{y-intercept}$

⑦ Graph: a) $y = -2x + 2$

b) $y - 4 = \frac{1}{3}(x + 2)$



* watch your signs carefully with slope-point form

$$\begin{aligned} & y - 4 = \frac{1}{3}(x + 2) \\ \rightarrow & y - 4 = \frac{1}{3}(x - -2) \end{aligned}$$

⑧ Change to General Form.

$$a) y = \overset{\times 20}{\frac{5}{4}}x - \overset{\times 20}{\frac{3}{5}}$$

$$20y = 25x - 12$$

$$\underline{-20y \qquad \qquad -20y}$$

$$0 = 25x - 20y - 12$$

≡

$$25x - 20y - 12 = 0$$

Coefficient of x
must be positive.

No decimals/Fractions.

$$b) y + 4 = \frac{2}{3}(x - 1)$$

$$\overset{\times 3}{y} + \overset{\times 3}{4} = \overset{\times 3}{\frac{2}{3}}x - \overset{\times 3}{\frac{2}{3}}$$

$$3y + 12 = 2x - 2$$

$$\underline{-3y \quad -12 \quad | \quad -3y \quad -12}$$

$$0 = 2x - 3y - 14$$

$$2x - 3y - 14 = 0$$