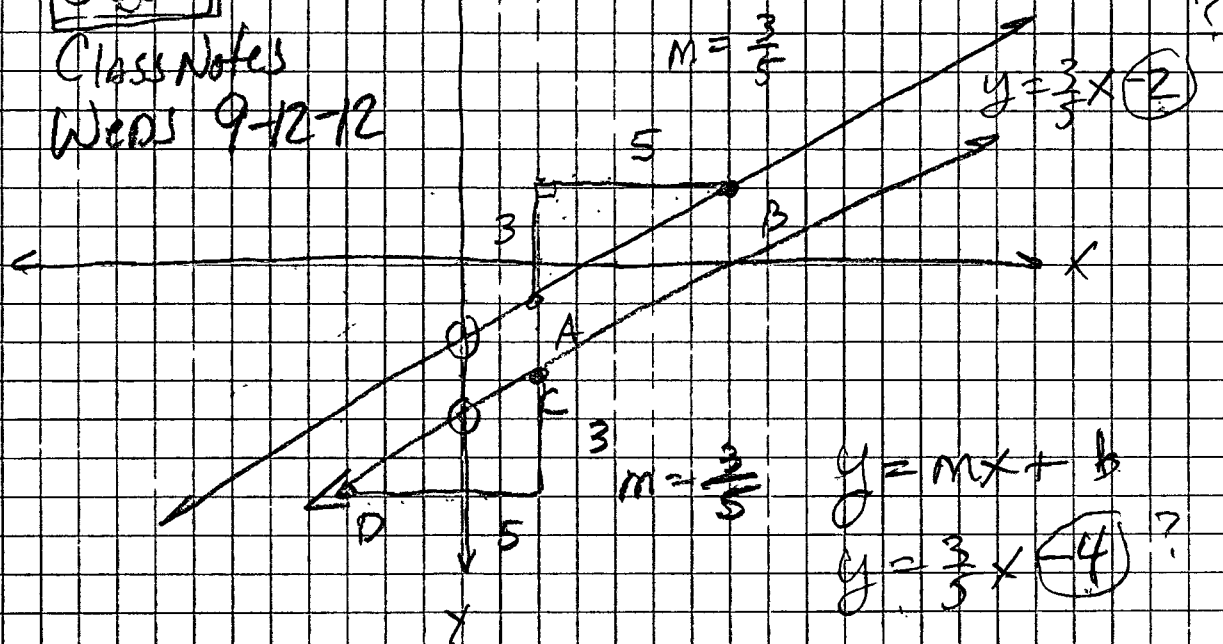


(15)

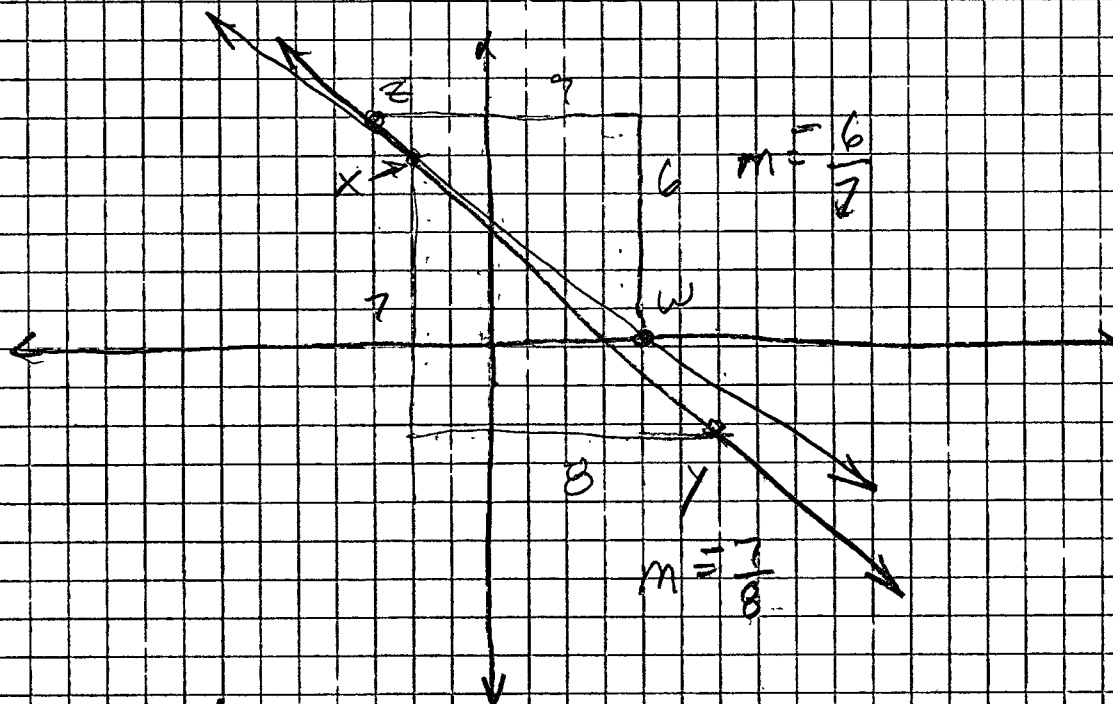
Geo

Class Notes

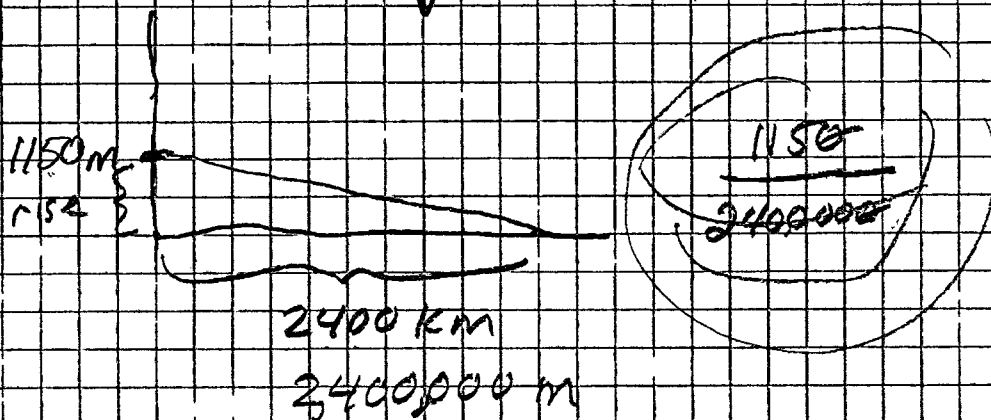
Weeks 9-12-12

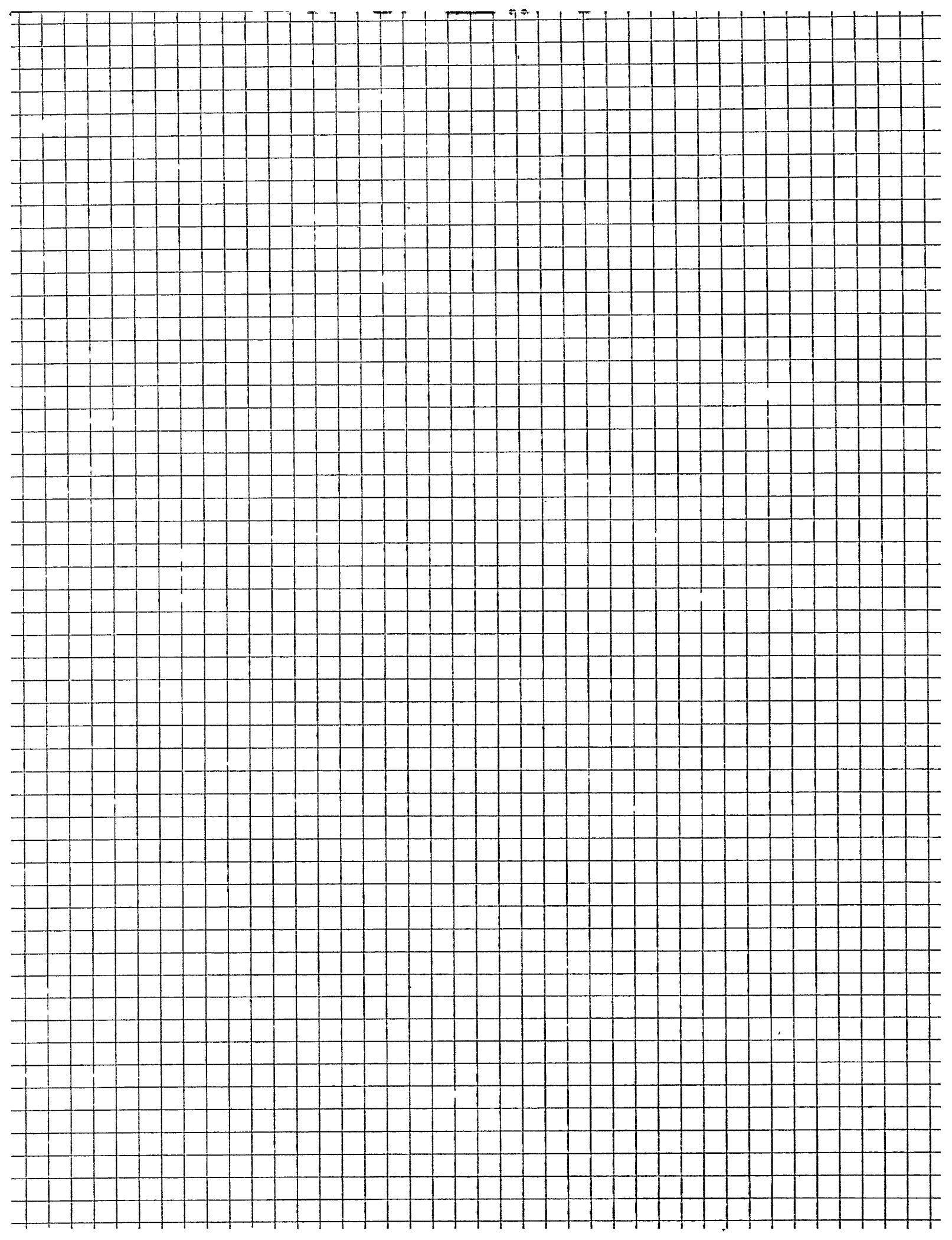


(16)



(18)





x, y
 (15) $(3, -9), (19, -20)$ S-I Form Eqn

$$\frac{-20 + 9}{19 - 3} = \frac{-11}{16} = m$$

$$y = m x + b$$

$$-9 = -\frac{11}{16} \left(\frac{3}{1} \right) + b$$

$$-9 = -\frac{33}{16} + b$$

$$+\frac{33}{16} \quad +\frac{33}{16}$$

$$-\frac{111}{16} = b$$

$$\begin{aligned} & -\frac{9}{1} + \frac{33}{16} \\ & -\frac{144}{16} + \frac{33}{16} = -\frac{111}{16} \end{aligned}$$

$$y = -\frac{11}{16}x - \frac{111}{16}$$

47) $(-1, 2)$ // to $y = 2x + 3$

EOL IN POINT-SLOPE FORM

$$(-1, 2)$$

$$x_1, y_1$$

$$\text{POINT}$$

$$m = \frac{2}{1}$$

$$\text{SLOPE}$$

$$m(x - x_1) = y - y_1$$

$$y - y_1 = m(x - x_1)$$

$$y - 2 = 2(x + 1)$$

② $(4, 7), (-2, 1)$ S-I Form
 $y = mx + b$

③ $(0, -2), (4, 6)$ P-S Form
 $m(x - x_1) = y - y_1$
 $\frac{6 + 2}{4 - 0} = \frac{8}{4} = 2 = m$
 $y - y_1 = m(x - x_1)$

SAME LINE

$2(x - 0) = y + 2$ PS $2x - 2 = y$
 $ax + b = y$

$2(x - 4) = y - 6$ PS1

$2x - 8 = y - 6$
 $+6 \quad +6$

$2x - 2 = y$

SAME!
 S-I is unique

⑭ $(5, 2), (-2, 2)$ S-I Form

$$\frac{2-2}{-2-5} = \frac{0}{-7} = 0 = m$$

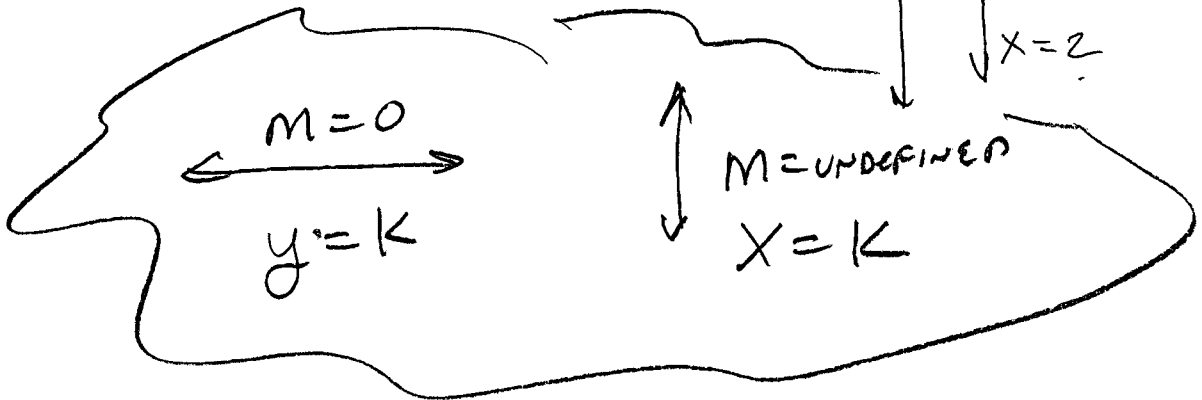
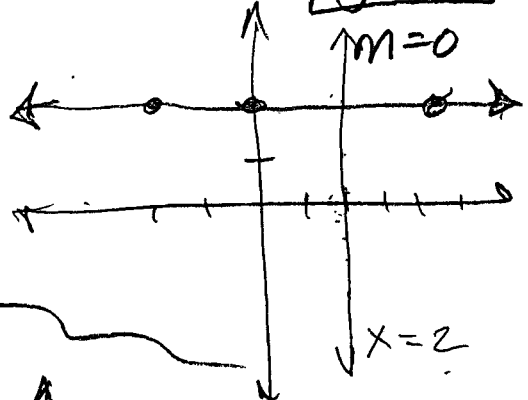
$$y = mx + b$$

$$2 = (0)(5) + b$$

$$2 = b$$

UNDERSTOOD, x is any thing

$$y = 2$$



⑬ $(0, -2), (4, 6)$

PS Form

$$m(x - x_1) = y - y_1$$

$$\frac{6 + 2}{4 - 0} = \frac{8}{4} = 2 = m$$

PS $2(x - 0) = y + 2$

$$2x = y + 2$$

- 2 - 2

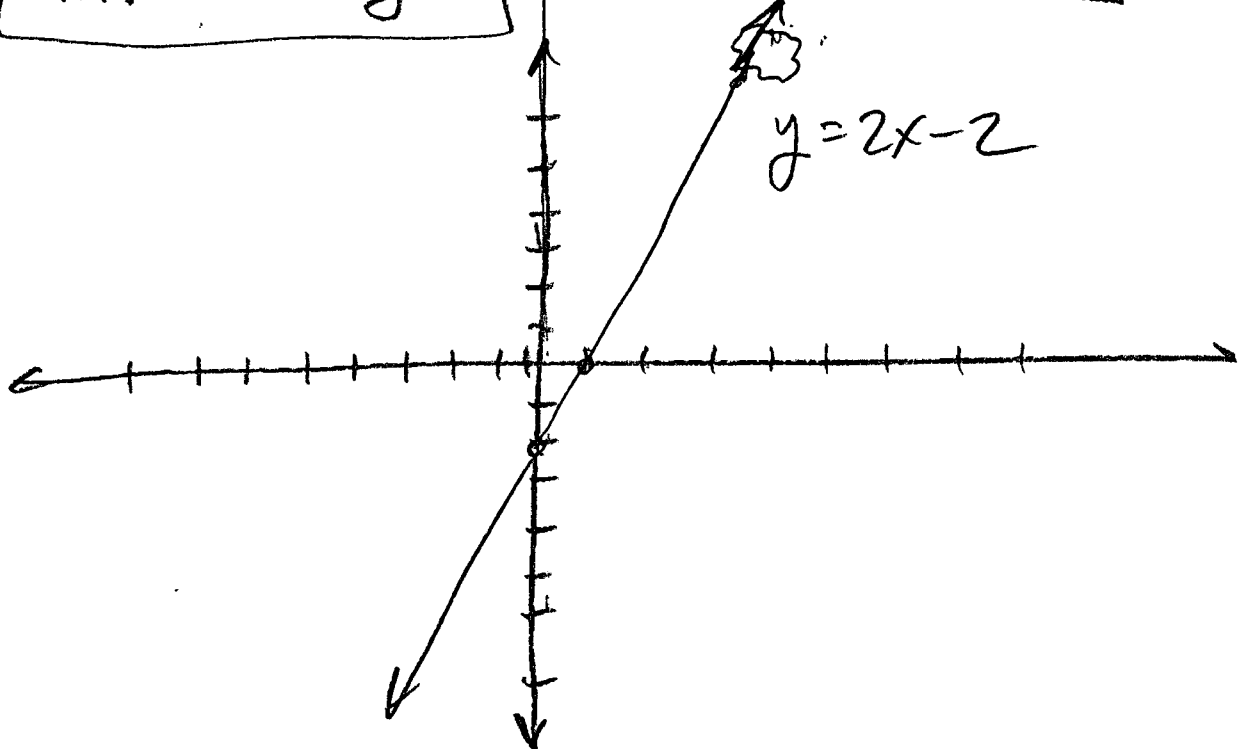
SI $\frac{2x - 2 = y}{mx + b = y}$

PS $2(x - 4) = y - 6$

$$2x - 8 = y - 6$$

+ 6 + 6

$\frac{2x - 2 = y}{mx + b = y}$



①⑦ $3x = -2y + 10$ Find m

$$\frac{3x - 10}{-2} = \frac{-2y}{-2}$$

same m

$$-\frac{3}{2}x + 5 = y$$

$$m = -\frac{3}{2}$$

③④ $(4, -1), (1, -4)$ S-I

$$\frac{-4 + 1}{1 - 4} = \frac{-3}{-3} = 1 = m$$

$$y = mx + b$$

$$-4 = (1)(1) + b$$

S-I Form

$$-5 = b$$

$$y = 1x - 5$$

(24)
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$$(-6, 2), (3, 6)$$

x, y

• SI Form
• Graph

$$\frac{6-2}{3-(-6)} = \frac{4}{9} = m$$

$$y = mx + b$$

$$6 = \left(\frac{4}{9}\right)\frac{3}{1} + b$$

$$\frac{18}{3} - \frac{4}{3}$$

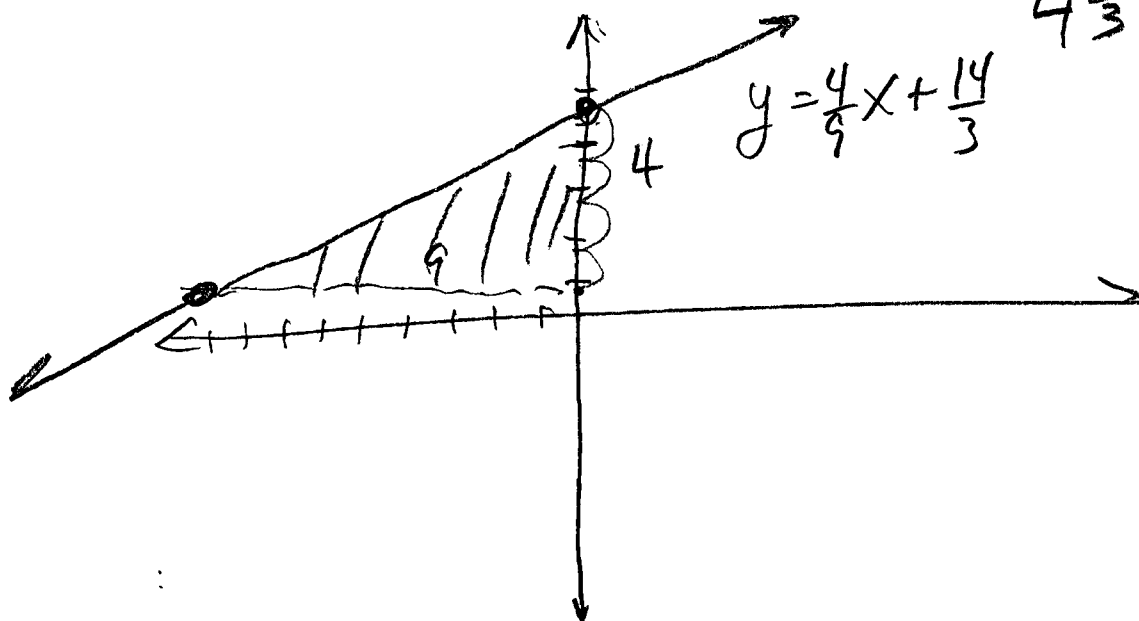
$$6 = \frac{4}{3} + b$$

$$- \frac{4}{3} \quad - \frac{4}{3}$$

$$\frac{14}{3} = b$$

$$y = \frac{4}{9}x + \frac{14}{3}$$

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



$$\textcircled{20} \quad \begin{array}{r} -5y + 3x = 20 \\ \quad -3x \quad -3x \end{array} \quad \text{SLOPE OF } \perp$$

$$\frac{-5y}{-5} = \frac{-3x + 20}{-5}$$

$$y = \frac{3}{5}x - 4$$

$$\boxed{m_{\perp} = -\frac{5}{3}}$$

$$\textcircled{21} \quad 2y - 4x + 16 = 2$$

$$\frac{2y}{2} = \frac{4x - 14}{2}$$

$$y = 2x - 7$$

$$\boxed{m_{\perp} = -\frac{1}{2}}$$

$$\textcircled{19} \quad -y - 4 = 0$$

$$-y = 4$$

$$y = -4$$

$$\boxed{m_{\perp} = \text{UNDEFINED}}$$

Ex (1, 2) m=6

$6(x-1) = y-2$	* PS
$y-2 = 6(x-1)$	* PS

$$\begin{array}{ccc}
 6x - 6 & = & y - 2 \\
 + 2 & & + 2
 \end{array}$$

SI

$6x - 4 = y$
