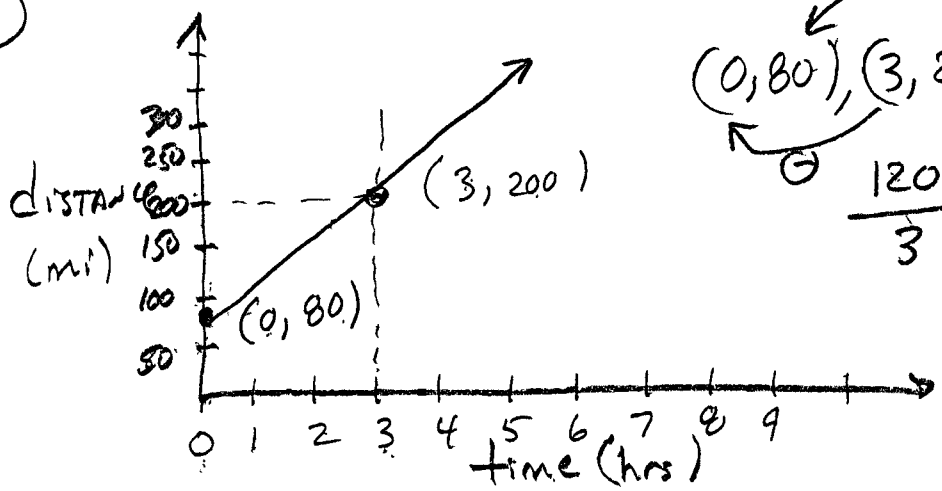
Geometry 1 CLASS NOTES TUESDAY 9-11-12

(6)



(0, 80), (3, 200)

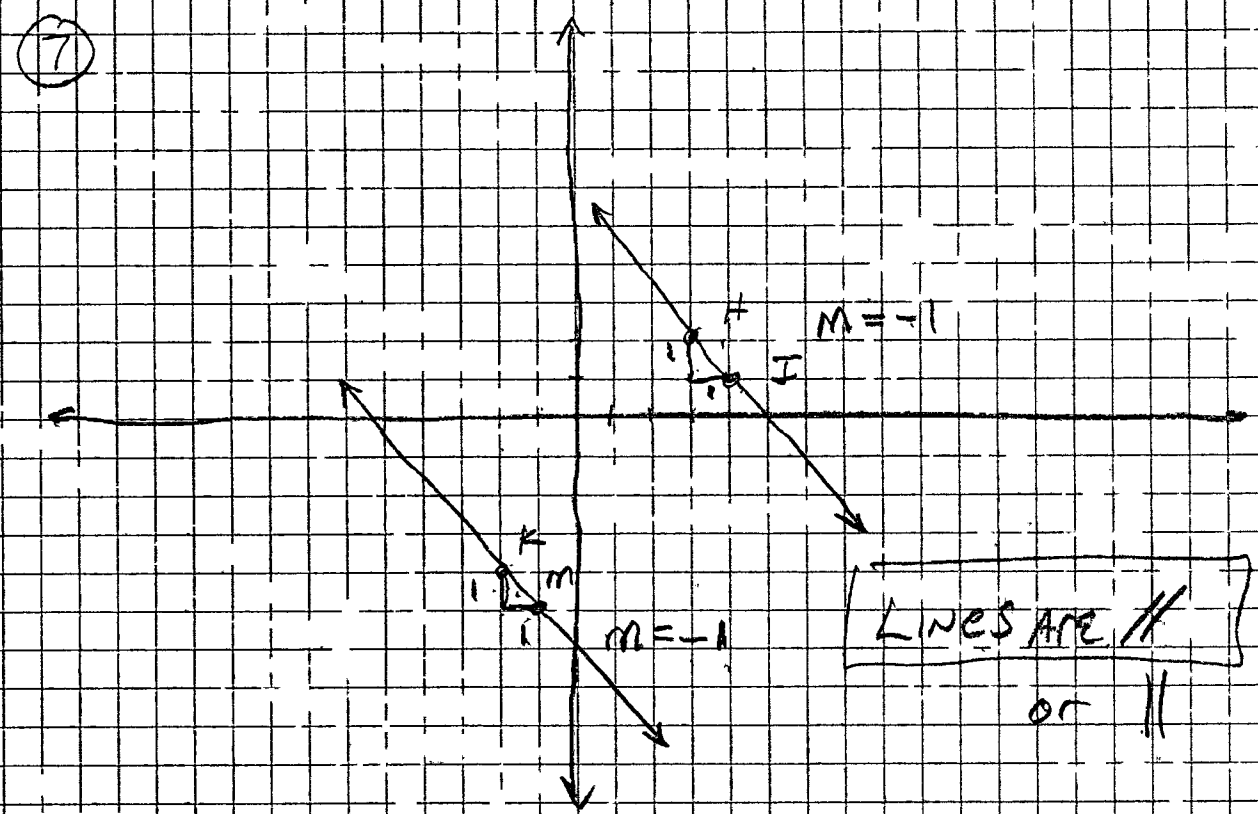
$$\frac{120 \text{ mi}}{3 \text{ hr}} = 40 \frac{\text{mi}}{\text{hr}}$$

BIRD ⇒ 80 mi by 8 AM ⇒ Let 8 AM = 0 hrs.
200 mi by 11 AM

$$y = mx + b$$

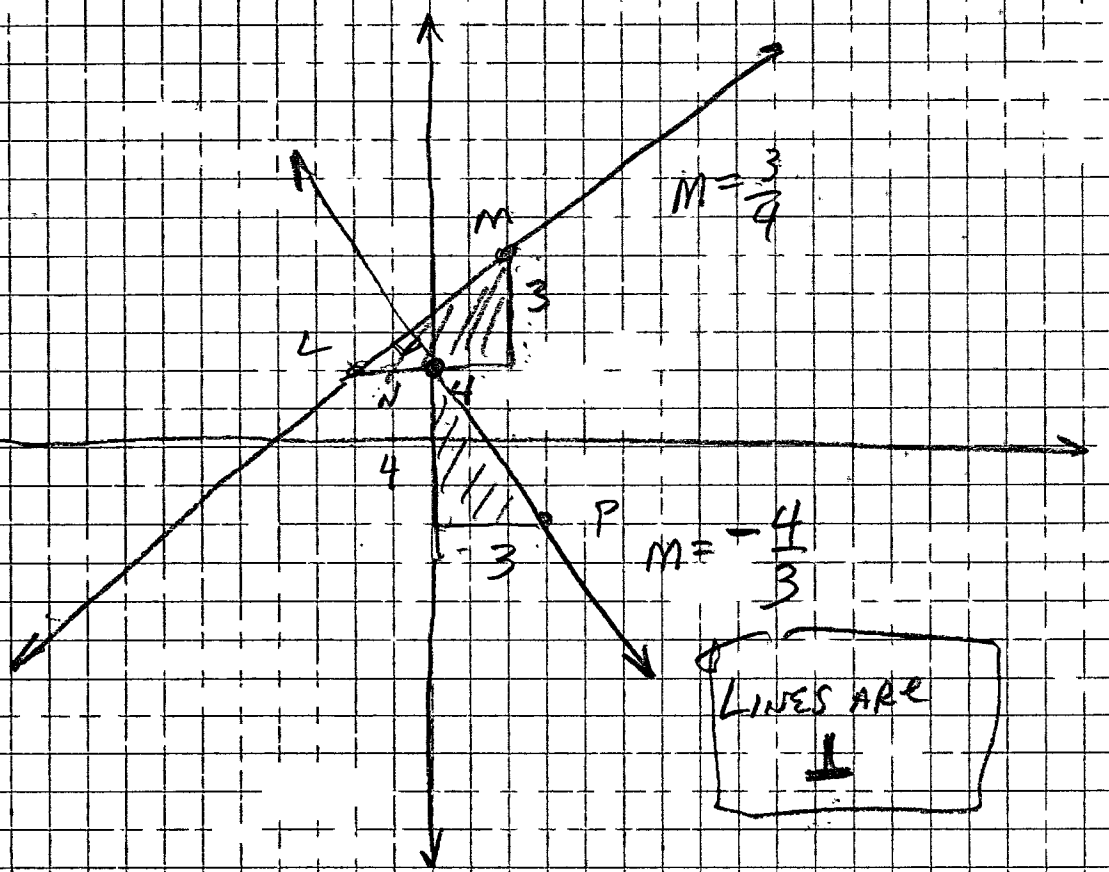
$$d = 40h + 80$$

(7)



LINES ARE // or ||

(8)



LINES ARE ⊥

SLOPE-INTERCEPT FORM $y = mx + b$

m = SLOPE, b = Y-INTERCEPT

POINT-SLOPE FORM $m(x - x_1) = y - y_1$

m = SLOPE, (x_1, y_1) = ANY POINT ON LINE

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

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(2) pg 194 $(4, 7), (-2, 1)$ ⊖

x, y ⊖

$\frac{1-7}{-2-4} = \frac{-6}{-6} = 1 = m$

$y = mx + b$

$7 = (1)(4) + b$

$-4 \quad -4$

$3 = b$

$\therefore \boxed{y = 1x + 3}$

$y = mx + b$

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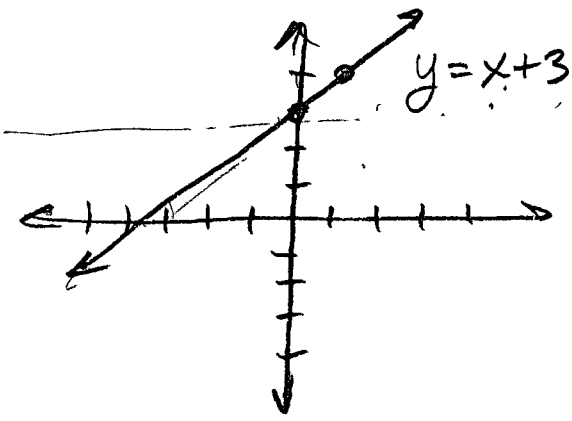
p-5 (EX) $m = 1$ Choose $(-2, 1)$ x_1, y_1

$\boxed{(1)(x+2) = y - 1}$ PS

$x + 2 = y - 1$

$\boxed{x + 3 = y}$ SI



③ pg 194 $(-4, 2)$ $m = \frac{3}{4}$ in Point-Slope Form

x_1, y_1

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

$$\boxed{\frac{3}{4}(x+4) = y - 2}$$ PS Form

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④ pg 194 x-intercept $= 4$ } S-I Form
y-intercept $= -2$ }

$(4, 0)$, $(0, -2)$ / $(0, b)$ — y-intercept by definition

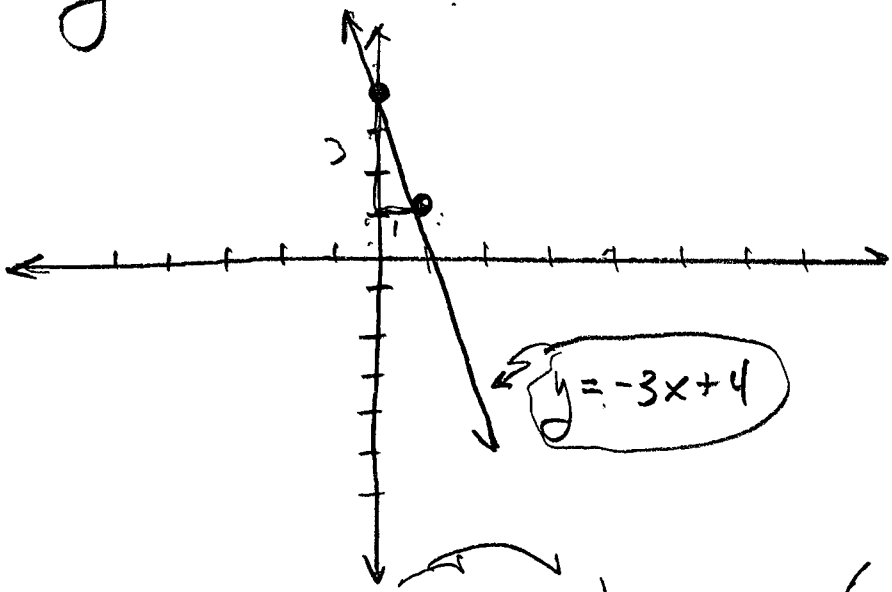
$$\frac{-2-0}{0-4} = \frac{-2}{-4} = \frac{1}{2} = m$$

* $$\boxed{y = \frac{1}{2}x - 2}$$

$y = mx + b$

(5) $y = mx + b$

$y = -3x + 4$



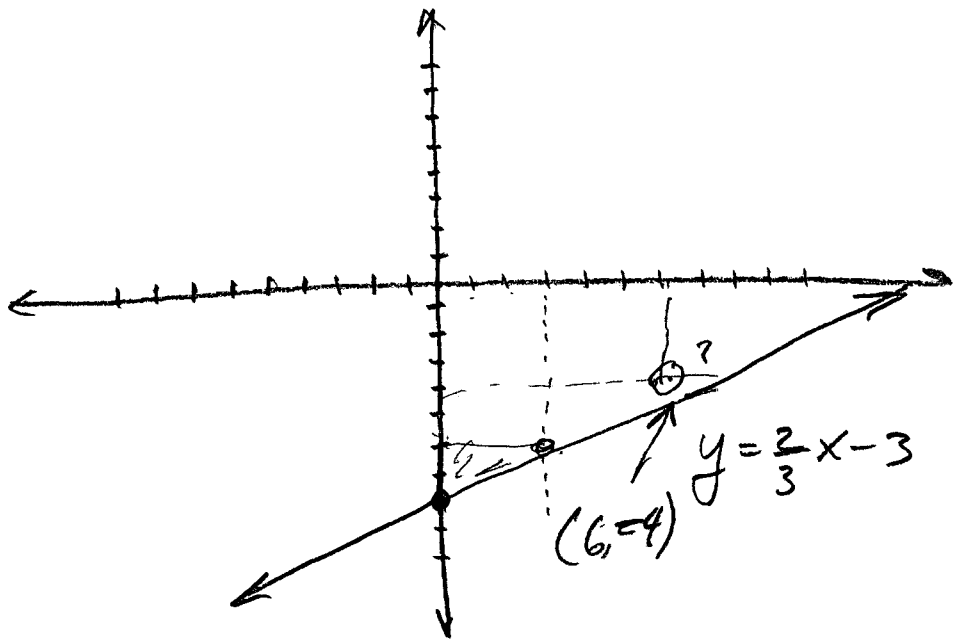
(6) $y + 4 = \frac{2}{3}(x - 6)$ PS $\left(m = \frac{2}{3}, (6, -4)\right)$

SLOPE POINT

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

$-4 \qquad -4$

$\boxed{y = \frac{2}{3}x - 8}$ SI



(45) through $(5,-1)$ // to $y=-\frac{4}{5}x+4$ in P-S Form

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

$m_{//}=\frac{-4}{5}$ $\quad P(5,-1)$ $x_1\ y_1$

* $-\frac{4}{5}(x-5)=y+1$

(Ex) through $(5,-1)$ $\perp$ to $y=-\frac{4}{5}x+5$

$m_{\perp}=+\frac{5}{4}$

* $\frac{5}{4}(x-5)=y+1$