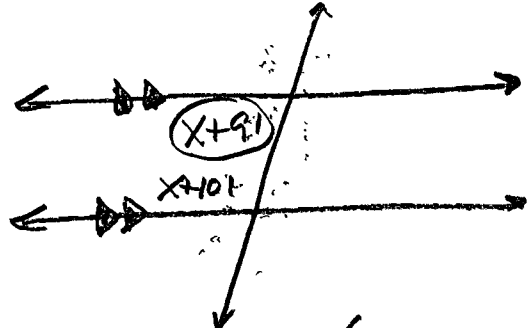


Geometry

Tues. 9-18-12

CLASS NOTES

28



$$(x+91) + (x+101) = 180$$

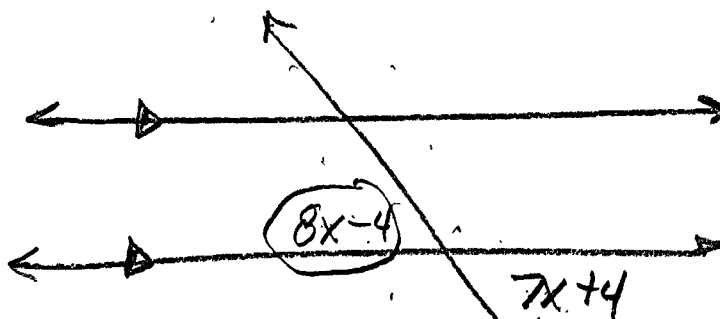
$$\begin{array}{r} \downarrow \\ 2x + 192 = 180 \\ - 192 \quad - 192 \end{array}$$

$$\frac{2x}{2} = \frac{-12}{2}$$

$$x = -6$$

$$\therefore (-6) + 91 = 85^\circ$$

(30)



$$8x - 4 = 7x + 4$$

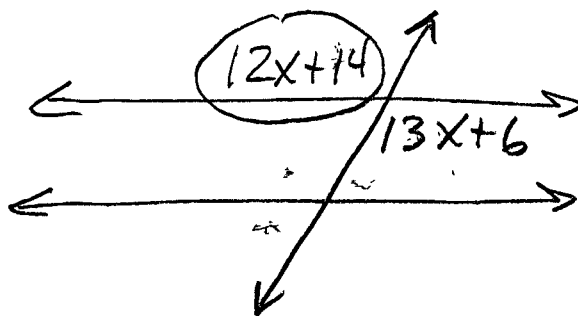
$$\begin{array}{r} -7x \\ -7x \end{array}$$

$$\begin{array}{r} x - 4 = 4 \\ +4 \quad +4 \end{array}$$

$$x = 8$$

$$\therefore 8(8) - 4 = \boxed{60^\circ}$$

(32)



$$12x + 14 = 13x + 6$$

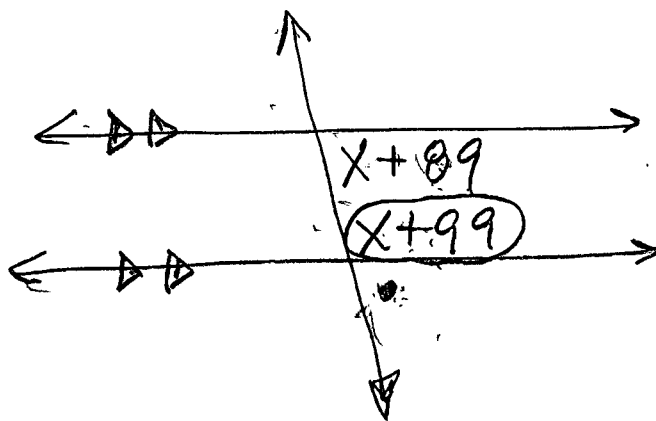
$$\begin{array}{r} -12x \\ -12x \end{array}$$

$$\begin{array}{r} 14 = x + 6 \\ -6 \quad -6 \end{array}$$

$$8 = x$$

$$\therefore 12(8) + 14 = \boxed{110^\circ}$$

34



$$(x + 89) + (x + 99) = 180$$

$$\begin{array}{r} \downarrow \\ 2x + 188 = 180 \\ - 188 \quad - 188 \end{array}$$

$$\frac{2x}{2} = \frac{-8}{2}$$

$$x = -4$$

$$\begin{aligned} \therefore (-4) + 99 \\ = 95^\circ \end{aligned}$$

36 $X = y$ FIND SLOPE

$y = x$
 $y = mx + b$

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

$b = 0$

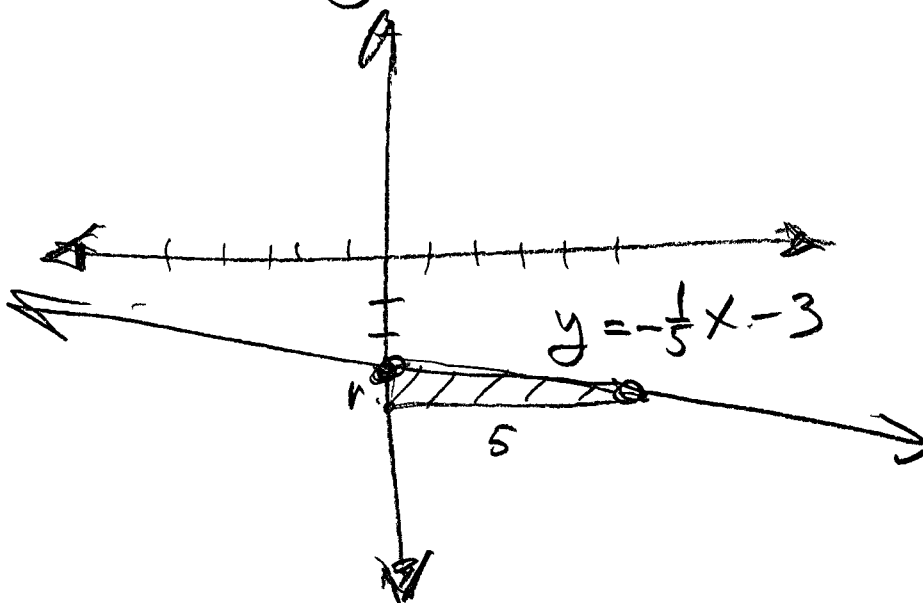
38 $15 + 5y = -x$ FIND m
-15 -15

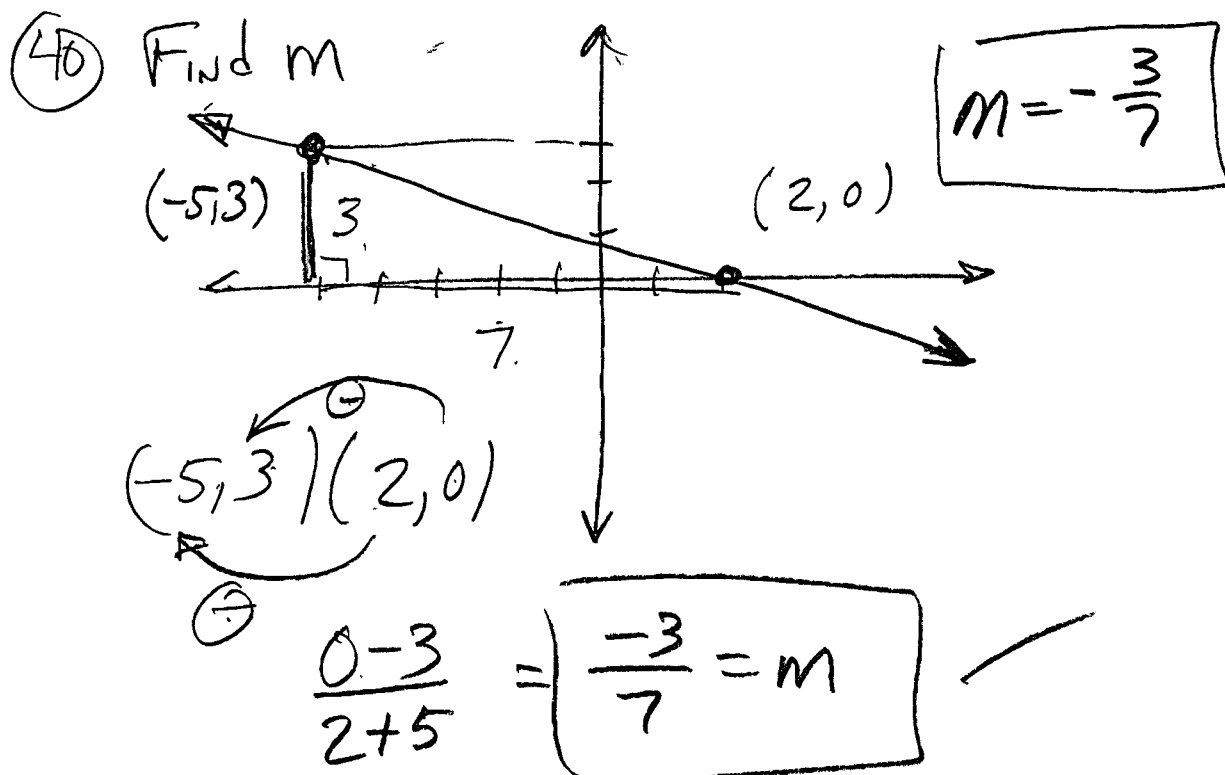
$\frac{5y}{5} = \frac{-x - 15}{5}$

$y = -\frac{1}{5}x - 3$
 $y = mx + b$

$m = -\frac{1}{5}$

~~$x | x$~~
 $0 | -3$





(41) $d^2 = (3)^2 + (7)^2$

$d = \sqrt{58}$

58
 $\sqrt{58}$
 29
 2

⑦② P-S Form $m(x-x_1) = y-y_1$

through $(-4, 0)$
 x_1, y_1 // to $y = \frac{3}{4}x + 1$

POINT

$$m_{//} = \frac{3}{4}$$

SLOPE

PS

$$\frac{3}{4}(x+4) = y - 0$$

NOT
UNIQUE

↑
SLOPE

↑
POINT

~~SI~~
SI

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

SI

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

UNIQUE

36

$$x = y$$

$$y = mx + b$$

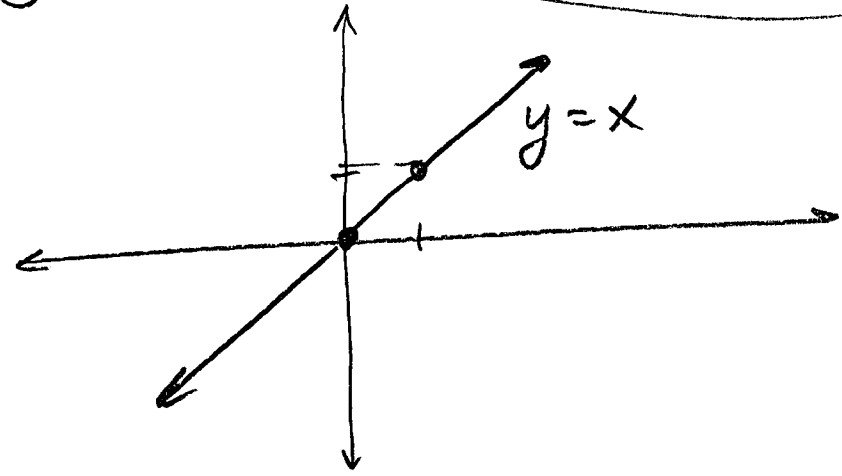
\uparrow \uparrow
 SLOPE y-intercept

$$y = 1x + 0$$

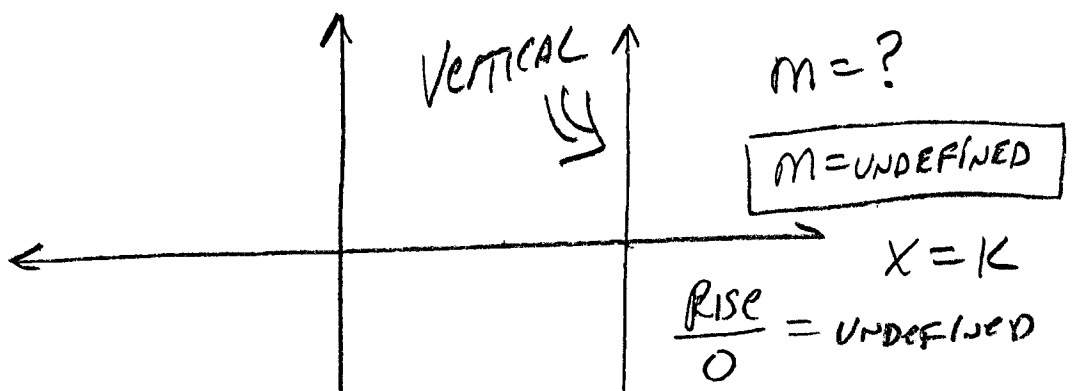
$$y = mx + b$$

$$y = f(x) = mx + b$$

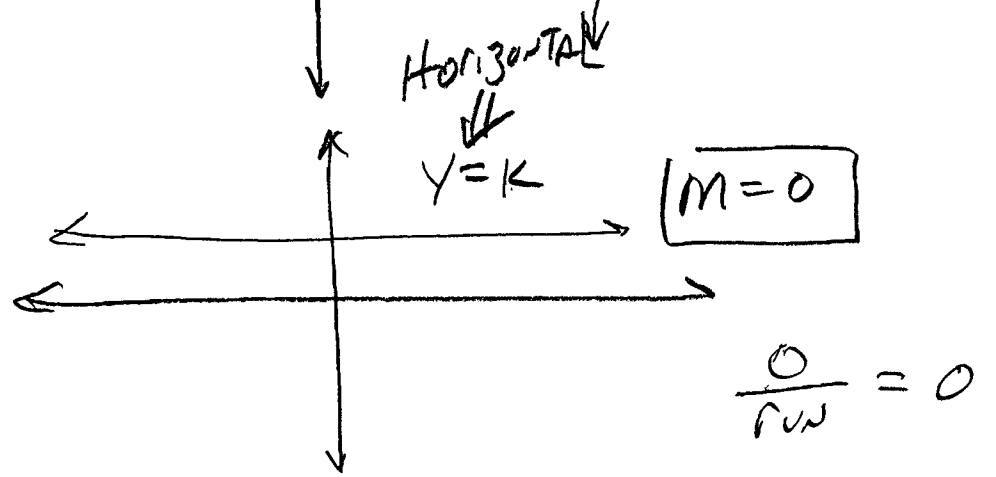
function form



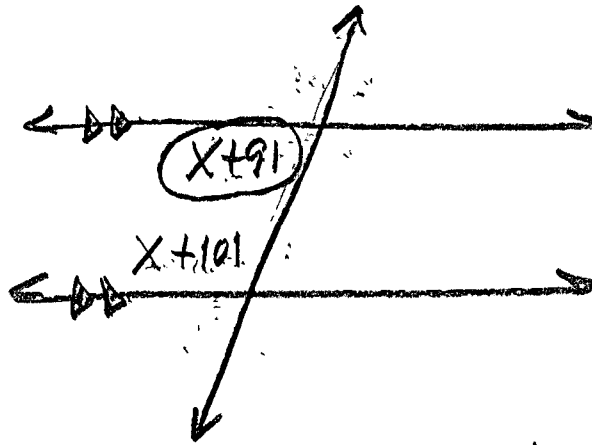
42



EX



(28)



$$(X+91) + (X+101) = 180$$

$$2X + 192 = 180$$

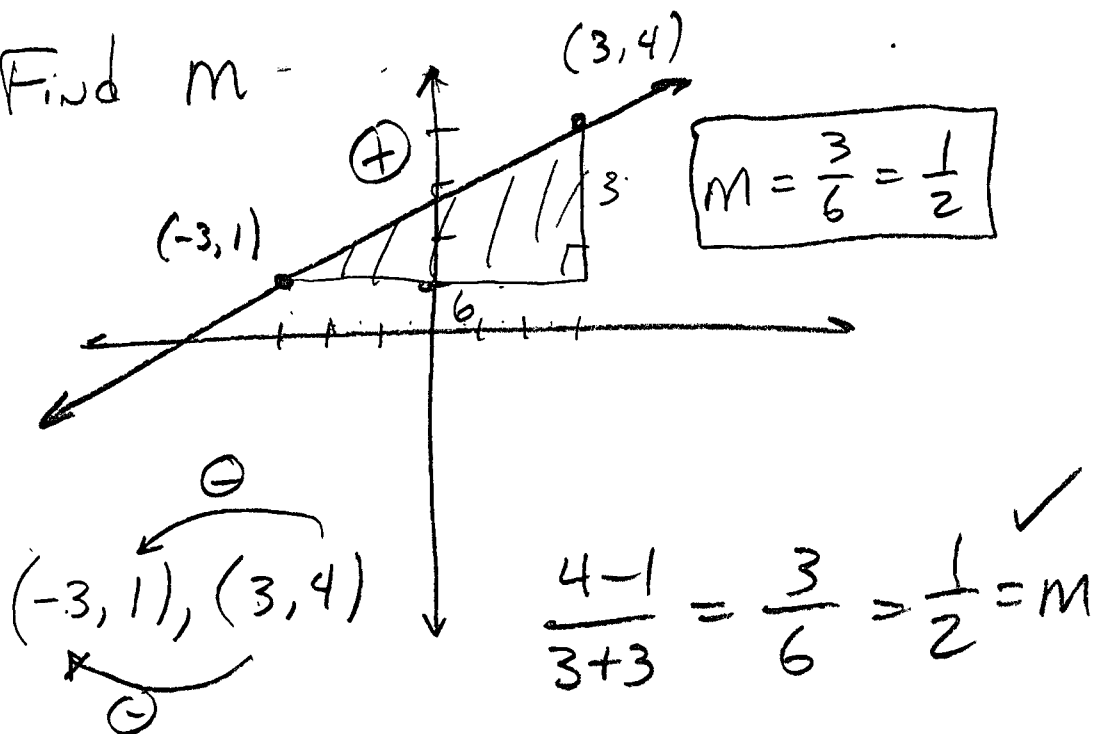
$$-192 \quad -192$$

$$\frac{2X}{2} = \frac{-12}{2}$$

$$X = -6$$

$$\therefore m\angle = (-6) + 91 = \boxed{85^\circ}$$

44 Find m -



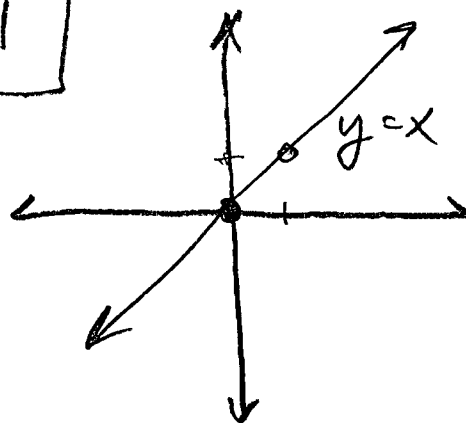
36 $m = ?$

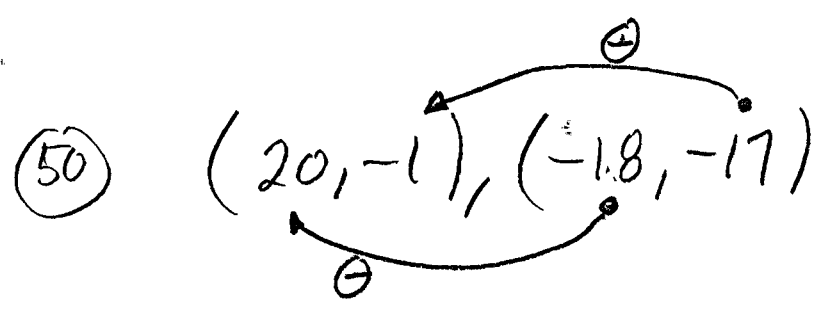
$$x = y$$

$$m = 1$$

$$y = 1x + 0$$

$$y = mx + b$$





$$\frac{-17 + 1}{-18 - 20} = \frac{-16}{-38} = \boxed{+\frac{8}{19} = m}$$

74

Point-Slope Form (x_1, y_1) // to $y = -\frac{7}{4}x + 1$

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

\uparrow \uparrow \nearrow
 y_1 m x_1

$m_{||} = -\frac{7}{4}$

$$\boxed{y + 4 = -\frac{7}{4}(x - 4)}$$
 PS Form

SI \Downarrow

$$y + 4 = -\frac{7}{4}x + 7$$

$+4$ -4

$$\boxed{y = -\frac{7}{4}x + 3}$$
 SI Form "UNIQUE"



(54) $m_{//} = ?$ $y - 1 = -3x$
 $+1$ $+1$

$m_{//} = -3$

$y = -3x + 1$
 \uparrow
 m

(ex) $m_{\perp} = +\frac{1}{3}$

(56) $m_{//} = ?$ $\frac{-2x + 10}{5} = \frac{5x}{5}$

$m_{//} = -\frac{2}{5}$

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

(ex) $m_{\perp} = +\frac{5}{2}$

$$\textcircled{58} \quad \frac{2}{5}y + \frac{4}{5}x = 2 \quad \text{Find } m_{\perp}$$

* Slopes of perpendicular lines are opposite reciprocals

$$-\frac{4}{5}x \quad -\frac{4}{5}x$$

$$\frac{\frac{2}{5}y}{\frac{2}{5}} = \frac{-\frac{4}{5}x + 2}{\frac{2}{5}}$$

$$y = \left(\frac{-\frac{4}{5} \cdot \frac{5}{2} \right) x + \frac{2}{1} \cdot \frac{5}{2}$$

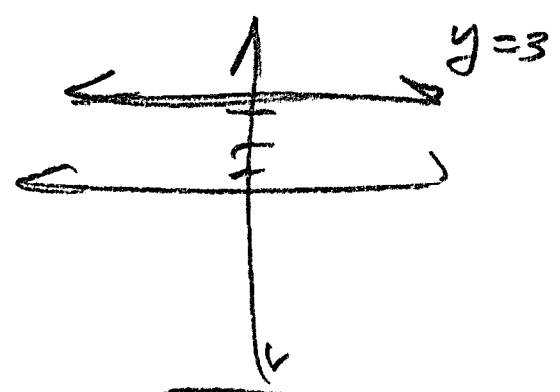
$$y = -2x + 5$$

$$\therefore m_{\perp} = +\frac{1}{2}$$

60 $0 = 1 - \frac{1}{3}y$ $m_L = ?$

$\frac{3}{1} \cdot \frac{1}{3}y = 1 \cdot 3$

$y = 3$



$m_L = \text{UNDEFINED}$

68 $(0, -1), (4, 1)$ S-I Form

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

$$y = mx + b$$

$$1 = \frac{1}{2}(4) + b$$

$$1 = 2 + b$$

$$-1 = b$$

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

72 PS Form

$(-4, 0)$
 x_1, y_1

POINT

// to $y = \frac{3}{4}x + 1$

$$m_{11} = \frac{3}{4}$$

SLOPES

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

$$\frac{3}{4}(x + 4) = y - 0$$

PS
NOT
UNIQUE