

Algebra Monday 12-10-12 Class Notes

⑬ $(0, 3), (-2, -5)$

$\uparrow \uparrow$
 x, b

$y = m x + b$

$(0, 3), (-2, -5)$

$$\frac{-5 - 3}{-2 - 0} = \frac{-8}{-2} = +4 = m$$

$y = 4x + 3$

⑭

$(-1, 5), (-3, 4)$

EOL in S-I Form

$y = m x + b$

$$m = \frac{4 - 5}{-3 - (-1)} = \frac{-1}{-2} = +\frac{1}{2} = m$$

$$y = \frac{1}{2}x + b$$

$$5 = \frac{1}{2}(-1) + b$$

$$5 = -\frac{1}{2} + b$$

$$\frac{11}{2} = (5\frac{1}{2} = b)$$

$y = \frac{1}{2}x + \frac{11}{2}$

Write the S-I Form of
line through: $(4, 1), (0, 3)$

(x, y) x b $?$

$$y = m x + b$$

$\uparrow$ $\downarrow$ 3

$(4, 1), (0, 3)$

$$\frac{3-1}{0-4} = \frac{2}{-4} = -\frac{1}{2} = m$$

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

$\uparrow$

$$1 = -\frac{1}{2} \cdot 4 + b$$

$$1 = -2 + b$$

$+2$ $+2$

$$3 = b$$

$$y = -\frac{1}{2}x + 3$$

(EX) Eq of horiz and vert lines
and slope through a point

<u>POINT</u>	<u>HL</u> <u>Eq</u>	<u>Horiz</u> <u>m</u>	<u>Vert</u> <u>Eq</u>	<u>Vert</u> <u>m</u>
$(-2, 6)$	$y = 6$	0	$x = -2$	UNDEF.
$(5, -1)$	$y = -1$	0	$x = 5$	UNDEF.
$(15, 12)$	$y = 12$	0	$x = 15$	UNDEF.
$(-1, \frac{2}{3})$	$y = \frac{2}{3}$	0	$x = -1$	UNDEF.
$(1, 2)$	$y = 2$	0	$x = 1$	UNDEF.

Look

HORIZONTAL AND VERTICAL
Lines!

① $m = ?$ $(16, -9), (13, -1)$

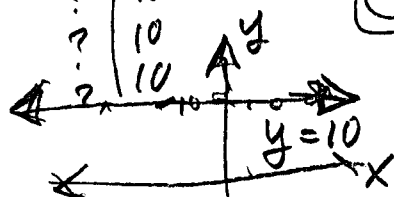
$$\frac{-1 + 9}{13 - 16} = \frac{8}{-3} = -\frac{8}{3} = m$$

$m = ?$ and EOL.

horizontal line through $(-4, 10)$

Y IS STUCK ON 10

X	Y
?	10
?	10
?	10

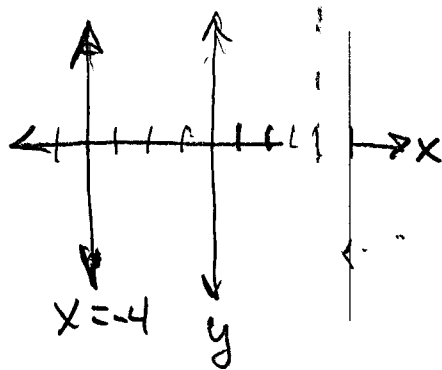


$$y = 10 \text{ EOL}$$

$$m = 0$$

VERTICAL line through $(-4, 10)$

X IS STUCK ON -4



$$x = -4$$

$$m = \text{UNDEFINED}$$

X

X	Y
-4	?
-4	?
-4	?
...	...