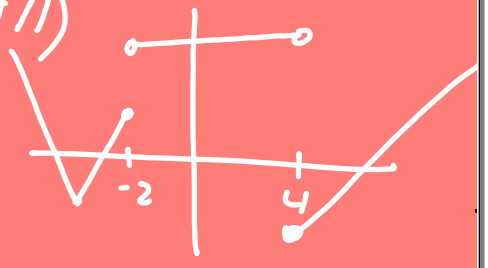
Linear Functions

Write point-slope slope-intercept

Piecewise Functions (Review #11)

$$f(x)=\begin{cases} 2|x+6|-3 & x\le -2 \\ 8 & -2<x<4 \\ x-7 & x\ge 4 \end{cases}$$



$f(9) = 9-7 = 2$ (9 ← x)

$f(0) = 8$

$f(-2) = 2|-2+6|-3$

$= 2|4|-3 = 2(4)-3$

$= 8-3 = 5$

See #11 on review sheet

$[-2.3] =$

Slope-intercept

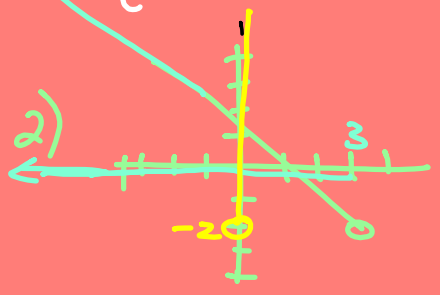
$y = mx+b$

Point-Slope

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

1) $\{(-2,3)(4,6)(-2,7)(5,3)(9,0)\}$ No

2)



Domain: x Lto k $x < 3$

Range: y Lowto High $y > -2$

3) Find slope.

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

$4x + 8y = -13$ $m = -\frac{A}{B} = -\frac{4}{8} = -\frac{1}{2}$

$x = 7$

undef. $\frac{1}{0}$

$y = -3$
$m = 0$

4) Parallel | ⊥ | neither

$y = 8/3x - 5$ $m = 8/3$

$16x - 6y = 11$ $m = \frac{+16}{+6} = \frac{8}{3}$

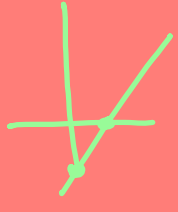
Parallel

$m_1 = 8/3$

$m_2 = 3/8$

5) Find x- + y-int.

$2x - 6y = 24$



12	0
0	-4

x-int (12,0)

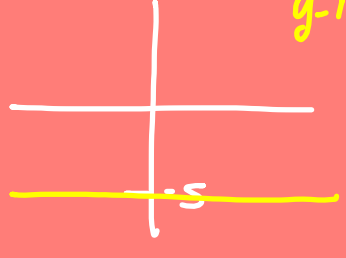
y-int (0,-4)

x-int? y-int?

$y = -5$

x-int = none

y-int = (0,-5)



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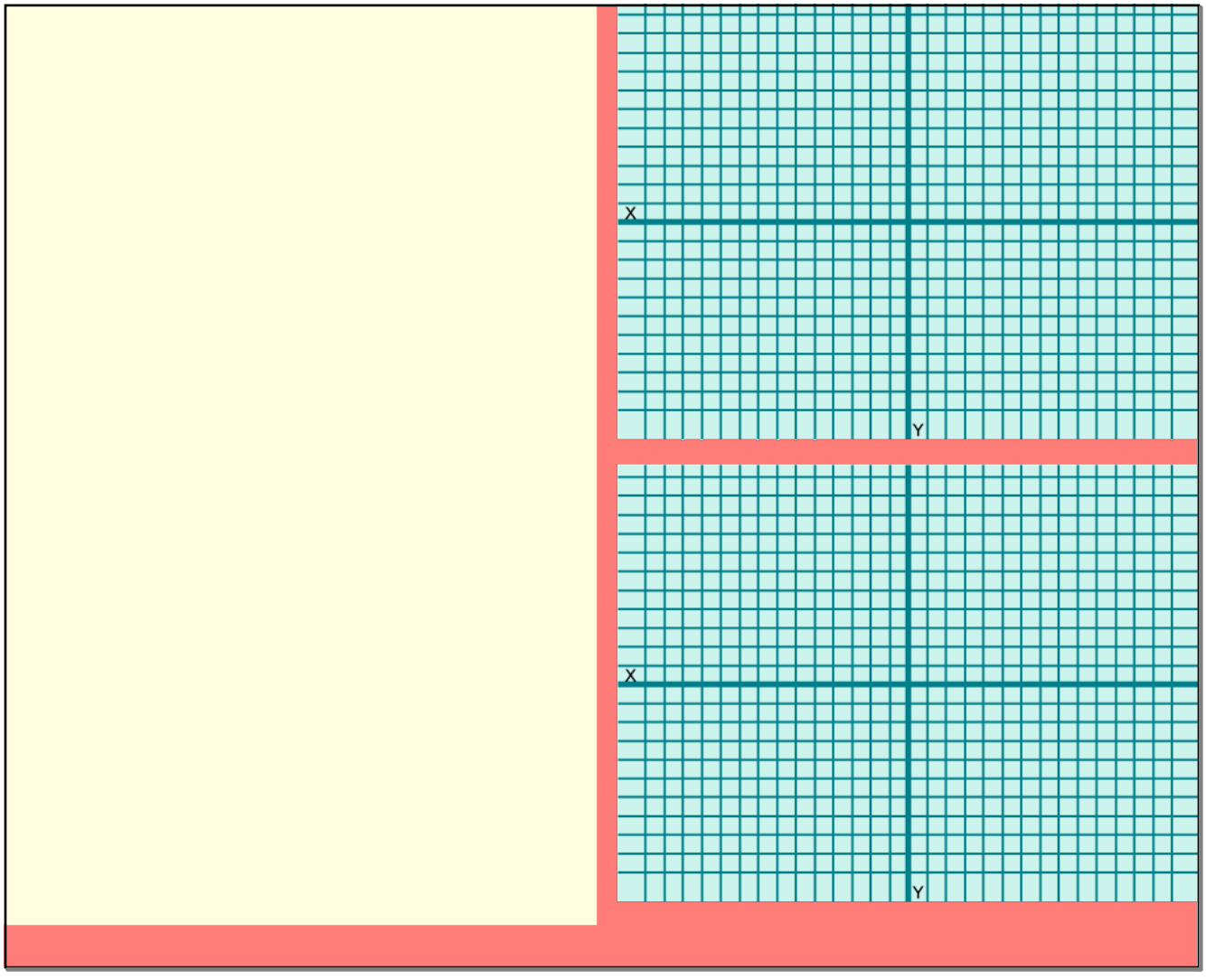
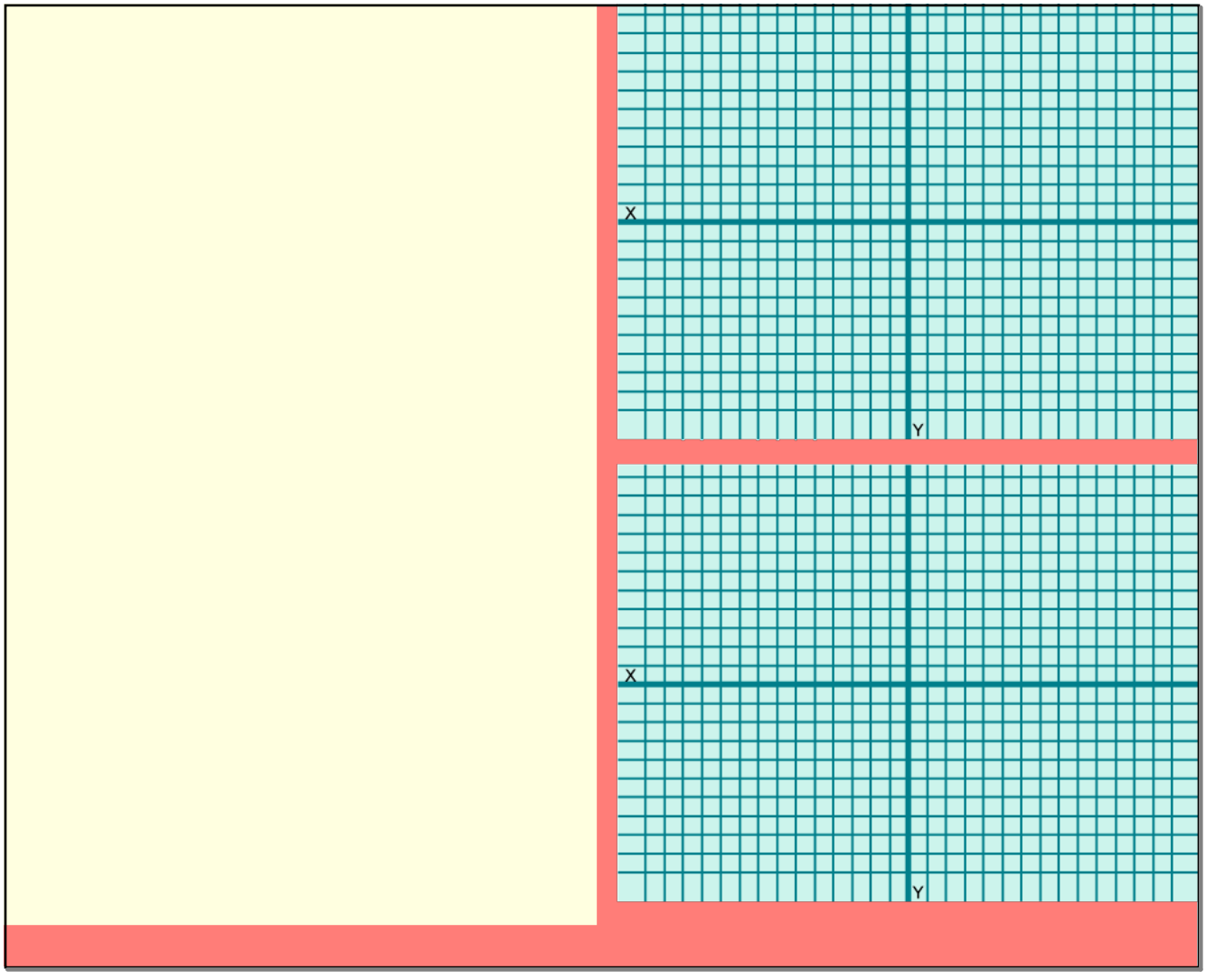


September 15, 2023



1 Slope-Int. $y = mx + b$ Point-Slope $y - y_1 = m(x - x_1)$

Lines 2 video

$(5, 3)$ + $\perp$ to $2x - 7y = 4$

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

$\perp m = \frac{-7}{2}$

$y - 3 = \frac{-7}{2}(x - 5)$