

p. 439

ex 6

~~$x + 2y = 5$~~
 $x = 5$ →

$x + 2y = 5$

x	y
0	$\frac{5}{2}$
5	0
2	$\frac{1.5}{2}$
1	2

$0 + 2y = 5$
 $2y = 5$
 $y = \frac{5}{2}$

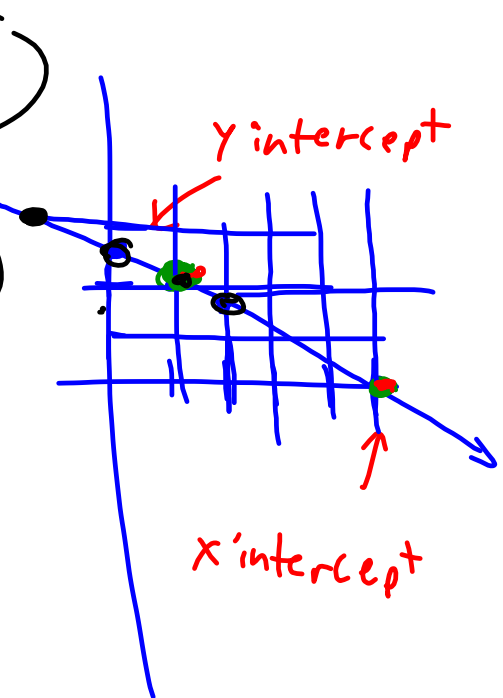
$x + 2 \cdot 2 = 5$
 $x + 4 = 5$
 $x = 1$

$x + 2y = 5$

x	y
0	$\frac{5}{2}$
5	0
2	$\frac{1.5}{2}$
1	2

$\frac{1}{2}$

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



x	y
0	$\frac{5}{2}$
2	0

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\frac{3}{2} - \frac{5}{2}}{2 - 0} = \frac{-1}{2}$$

$$\frac{\frac{2}{5} - \frac{3}{2}}{0 - 2} = \frac{1}{-2}$$

ex 10

$$5x + 2y = 10 \quad -5x \rightarrow 2y = -5x + 10$$

x_{int}
 $(2, 0)$

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

y_{int}
 $(0, 5)$
 $y = \frac{-5}{2}x + 5$
 $y = mx + b$

$$5x + 2 \cdot 0 = 10$$


$$5 \cdot 0 + 2y = 10$$

$x = 2$ $+1$ $(0, 5)$ $(-\frac{2}{2}, 5)$ $y = 5$
 $\rightarrow 1, (\frac{1}{2}, 5)$

$$\begin{aligned} 5 \cdot 1 + 2y &= 10 \\ 5 + 2y &= 10 \\ 2y &= 5 \\ y &= \frac{5}{2} \end{aligned}$$

ex 14 $3x - 7y = 9$

x int $(\underline{3}, 0)$ y int $(0, \underline{-\frac{9}{7}})$

ex 18 

$x = -3$

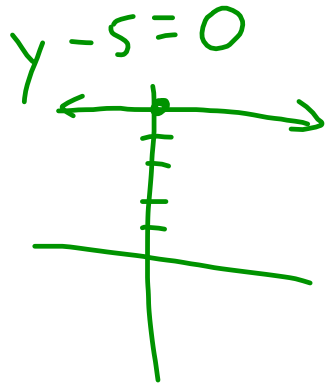
x int $(-3, 0)$

y int none

ex 22 $y - 5 = 0$

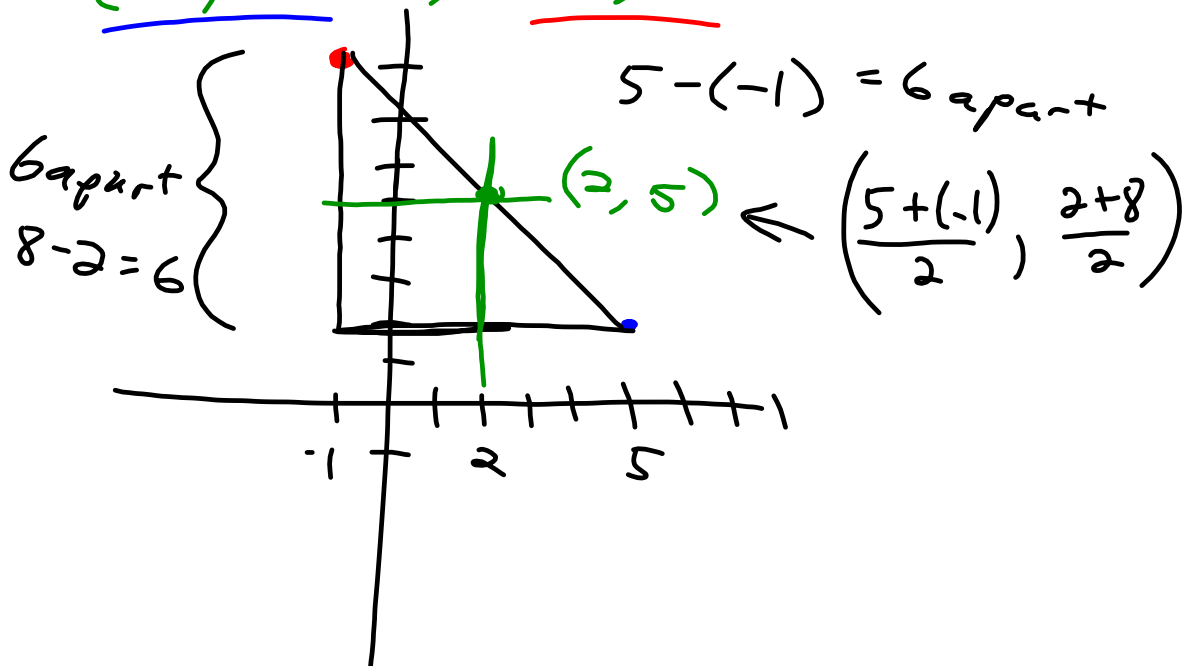
y int $(0, 5)$

x int none



ex 28 find the midpt.

$(5, 2)$, $(-1, 8)$



ex 32 Find midpt.
 $(4, -3)$ & $(-1, 3)$

$$\left(\frac{4 + (-1)}{2}, \frac{-3 + 3}{2} \right)$$

$$= \left(\frac{3}{2}, 0 \right)$$

ex 48 Find slope

x	y
-4	1
-3	4

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

x	y
-6	3
2	3

$m = \frac{3 - 3}{2 - (-6)} = \frac{0}{8} = 0$

horizontal
line

ex 56 $(4, -1)$ & $(4, 3)$

$$m = \frac{3 - (-1)}{4 - 4} = \frac{4}{0} \text{ undef'd}$$

vertical line

ex 68 Find slope.
 coeff of $x \rightarrow 1$
 chg sign $\rightarrow -$
 coeff of $y \rightarrow 3$
 $\frac{1}{3}$

$$\textcircled{1}x + \textcircled{3}y = -6$$

$$3y = -x - 6$$

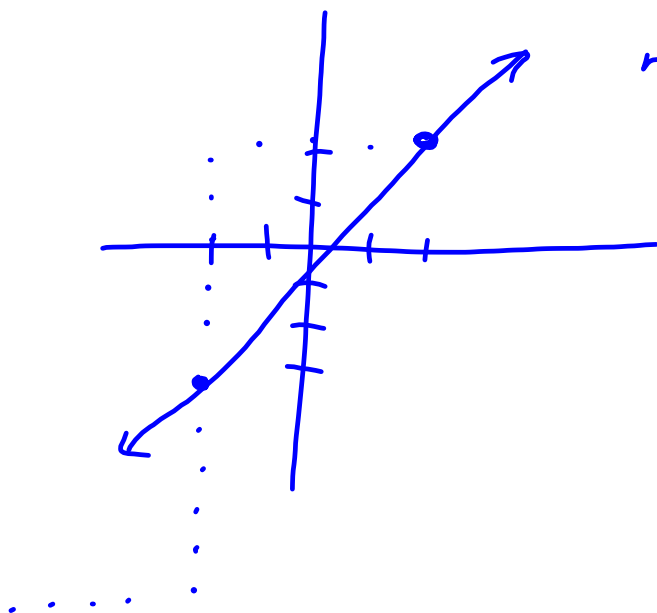
$$y = \textcircled{-\frac{1}{3}}x - 2$$

x	y
0	-2
-6	0

$$\frac{-2 - 0}{0 - (-6)} = \frac{-2}{6} = -\frac{1}{3}$$

ex 78 $(-2, -3)$ $m = \frac{5}{4}$ Graph the line

up 5
right 4



ex 92 Parallel, perpendicular, or neither
 same slope opposite signs and reciprocals anything else

$$2x + 5y = -7 \rightarrow m = -\frac{2}{5}$$

$$\boxed{5x - 2y = 1}$$

$$\rightarrow m = \frac{5}{2}$$

perpendicular

$$5x = 2y - 4$$

$$-2x - 7y = 4 \quad m = -\frac{-2}{-7} = -\frac{2}{7}$$

$$8x + 3y = 4 \quad m = -\frac{8}{3}$$

$$2y + 7x = 12 \quad \left(-\frac{7}{2}\right)$$