

Graph $y = -x - 2$ for domain $-2, -1, 0, 2$ → solve for y : $3x + 4y = 16$

2 days

4.2 Graph Linear Equations

* Dealing with $x \neq y$

Graph $-2x + y = -3$

→ Is in Standard Form

$$Ax + By = C$$

x, y on same side # on the other

1st - solve for y

$$\begin{array}{r} -2x + y = -3 \\ +2x \qquad +2x \end{array}$$

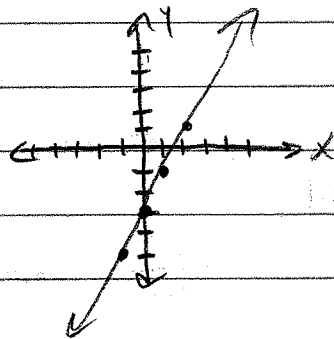
$$y = 2x - 3 \quad \text{or} \quad y = -3 + 2x$$

2nd - Make a table & pick some #'s for x . Find value for y

(Input) (output)

X	Y	
-1	-5	$2(-1) - 3$
0	-3	$2(0) - 3$
1	-1	$2(1) - 3$
2	1	$2(2) - 3$

3rd - Plot & Connect →



* $-2x + y = -3$ is a linear function
(it is a LINE)

Solution or not?

Which point works for $x + 2y = 5$?

a) $(-2, 3)$

$$x + 2y = 5$$

$$-2 + 2(3) = 5$$

$$-2 + 6 = 5$$

Nope!

b) $(4, \frac{1}{2})$

$$x + 2y = 5$$

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

$$4 + 1 = 5$$

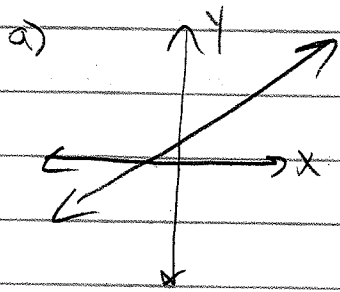
Yup!

Day 1
p219: 2-10,
11-21 odd,
23-25

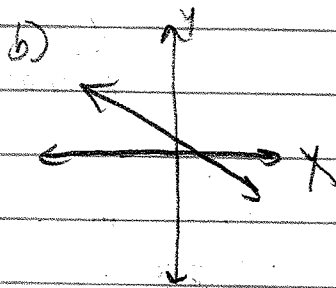
Day 2
p219: 18-22e
35-39,
42-55

(show using
 (x, y) intercept)

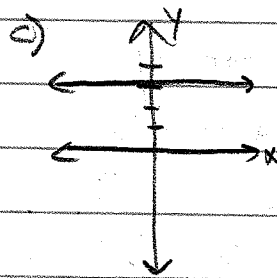
4 Types of Lines



Positive Slope



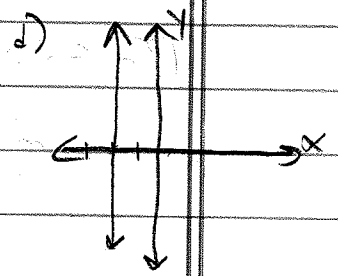
Negative Slope



Zero Slope
(Horizontal Line)

Only crosses y-axis

$$y = 3$$



Undefined Slope
(Vertical Line)

Only crosses x-axis

$$x = 2$$

$$x = -2$$

Graph each

a) $y + 4x = 1$

$$y = -4x + 1$$

b) $x = 2$

(Vertical line)

c) $y = -1$

(Horizontal line)

x	y	
-1	5	$-4(-1) + 1$
0	1	$-4(0) + 1$
1	-3	$-4(1) + 1$

