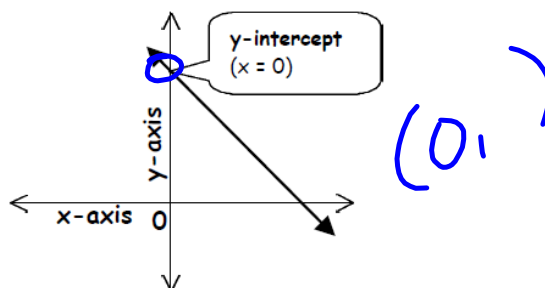
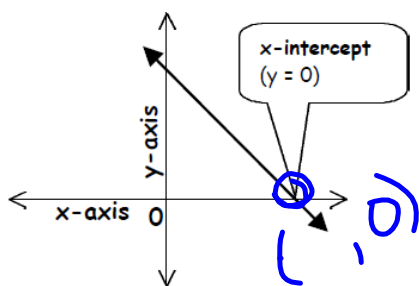


X and Y Intercepts:

X and Y Intercepts:

X-intercept= the point where a graph crosses the x-axis;
the point where $y = 0$

y-intercept= the point where a graph crosses the y-axis;
the point where $x = 0$



How to Find The X & Y Intercept:

Determine the x-intercept for $2x + y = 8$.

Solution:

$$\text{Let } y = 0 \rightarrow 2x + (0) = 8$$

$$\text{Solve for } x \rightarrow 2x = 8$$

$$x = 4$$

$$\text{x-intercept is } \rightarrow 4 \text{ or } (4, 0)$$

Determine the **y-intercept** for $2x + y = 8$.

Solution:

$$\text{Let } x = 0 \rightarrow 2(0) + y = 8$$

$$\text{Solve for } y \rightarrow y = 8$$

$$\text{y-intercept is } \rightarrow 8 \text{ or } (0, 8)$$

Example: $4x + y = 8$

Solve x
Let $y = 0$
 $4x + 0 = 8$
 $\frac{4}{4}x = \frac{8}{4}$
 $x = 2$
 $(2, 0)$

Solve y
Let $x = 0$
 $4(0) + y = 8$
 $y = 8$
 $(0, 8)$

PRACTICE:

Find the x and y intercept for the following equations & write them in $y=mx + b$ form and find the intercepts (x and Y):

1. $3x + y = 9$

$$\begin{aligned} 3x + 0 &= 9 \\ 3x &= 9 \\ x &= 3 \\ (3, 0) \end{aligned}$$

$$\begin{aligned} 3(0) + y &= 9 \\ y &= 9 \\ (0, 9) \end{aligned}$$

2. $5x + y = 20$

$$\begin{aligned} 5(0) + y &= 20 \\ y &= 20 \\ (0, 20) \end{aligned}$$

$$\begin{aligned} 5x + 0 &= 20 \\ 5x &= 20 \\ \frac{5x}{5} &= \frac{20}{5} \\ x &= 4 \\ (4, 0) \end{aligned}$$

Classwork/Homework

Copy & Complete

1. Rearrange the equations into the form $y=mx + b$:

a. $2x + 3y = 6$

b. $4x + 3y = 12$

c. $3x + y = 9$

d. $x + 4y = 8$

2. Find the x and y-intercepts

a. $4x + 5y = 20$

b. $3x - 4y = 12$

c. $2x + y = 4$

d. $5x + 3y = 15$

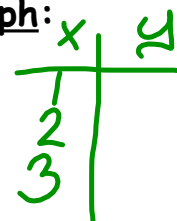
3. Create a table of values (at least 3 points) and graph:

a. $2x + y = 7$

b. $3x + y = 4$

c. $4x + y + 4 = 0$

d. $2x - y = 5$



Classwork/Homework

Copy & Complete

1. Rearrange the equations into the form $y=mx + b$:

a. $2x + 3y = 6$ $y = -2/3x + 2$ b. $4x + 3y = 12$ $y = -4/3x + 4$

c. $3x + y = 9$ $y = -3x + 9$ d. $x + 4y = 8$ $y = -1/4x + 2$

2. Find the x and y-intercepts

a. $4x + 5y = 20$ (5,0) (0,4)

b. $3x - 4y = 12$ (4,0) (0,-3)

c. $2x + y = 4$ (2,0) (0,4)

d. $5x + 3y = 15$ (3,0) (0,5)

3. Create a table of values (at least 3 points) and graph:

a. $2x + y = 7$

b. $3x + y = 4$

c. $4x + y + 4 = 0$

d. $2x - y = 5$

a)

x	y
1	5
2	3
3	1

b)

x	y
1	1
2	-2
3	-5

c)

x	y
1	-8
2	-12
3	-16

d)

x	y
1	-3
2	-1
3	1

Attachments

Sec 3.4 - Slopes.doc

Sec 3.4 - Write the equation of a line (1).doc

3.4 Review Assignment.doc

sec. 3.4 - Write the equation of a line (2).doc