**Intercepts**

The \( x \)-intercept of a graph is the \( x \)-coordinate of the point where the graph crosses the \( x \)-axis. The \( y \)-intercept of the graph is the \( y \)-coordinate of the point where the graph crosses the \( y \)-axis. Look at the graph to the right.

The line crosses the \( x \)-axis at the point \((4, 0)\). Thus, the \( x \)-intercept is 4. The line crosses the \( y \)-axis at the point \((0, -2)\). Thus, the \( y \)-intercept is -2.

Note: The coordinate of an intercept is always going to be zero.

Another way to graph linear equations is to use the \( x \)- and \( y \)-intercepts.

Graph \( y = 2x - 6 \) using the \( x \)- and \( y \)-intercepts.

To find \( x \)-intercept, let \( y = 0 \). To find the \( y \)-intercept, let \( x = 0 \).

\[
egin{align*}
0 &= 2x - 6 \\
6 &= 2x \\
3 &= x \text{ (} x \text{-intercept is 3)}
\end{align*}
\]

\[
egin{align*}
y &= 2(0) - 6 \\
y &= 0 - 6 \\
y &= y \text{ (} y \text{-intercept is -6)}
\end{align*}
\]

Thus, the ordered pair is \((3, 0)\). Thus, the ordered pair is \((0, -6)\).

Now, simply graph the intercepts and draw a line that connects them.

1. State the steps to graph a line whose \( y \)-intercept is 2 and \( x \)-intercept is 4.

2. State the steps to find the \( x \)- and \( y \)-intercept in the equation \( y = 2x - 2 \). Solve for the \( x \)- and \( y \)-intercept.

State the \( x \)- and \( y \)-intercept for each line.

3. \( a \)

4. \( b \)

5. \( c \)

State the \( x \)- and \( y \)-intercept for each line.

6. \(-y = x + 4\)

7. \( y = 2x - 6\)

8. \( y = \frac{1}{4}x + 1\)

9. \( y = x - 6\)

10. \( y = -4x + 8\)

11. \( y = \frac{1}{4}x - 2\)