**Warm Up:**

Given the points (0, 1) and (2, 5)
Write an equation in slope-intercept form.

**5.5 Standard Form**

**Learning Goal:** I will be able to graph and write linear equations in standard form.

**Standard Form:**

Another form of a linear equation is Standard Form:

$$Ax + By = C$$

Where $A$, $B$, and $C$ are

**Standard Form:**

Why can $A$ and $B$ not both be zero?

How would you write the equation in standard form?
Finding $X$ and $Y$ Intercepts:
Remember the $Y$-intercept is where the line crosses the $Y$-axis.

The is where the line crosses the

Examples 1 and 2:
Find the $x$- and $y$-intercepts of the graph of each equation.

\[
\begin{align*}
3x + 4y &= 24 \\
5x - 6y &= 60
\end{align*}
\]

Examples 3 and 4: (with your shoulder buddy)
Find the $x$- and $y$-intercepts of the graph of each equation.

\[
\begin{align*}
3x + & = 12 \\
+ 6y &=
\end{align*}
\]

Example 5:
Graph the following equation in standard form.
Example 6:
Graph the following equation in standard form.

Examples 7 and 8:
For each equation, tell whether its graph is a horizontal line or a vertical line. Then sketch a graph.

Writing in Standard Form:
Write the following in standard form:

Step 1: Write the original equation

Step 2: Multiply each side by 7

Step 3: Use the Distributive property

Step 4: Add 3x to each side

Example 9:
Write in Standard Form:

\[ y - 2 = (x + ) \]
Example 10: (with your shoulder buddy)
Write in standard form:
\[ y = -3x + 4 \]

Example 11:
Julie is in charge of selling tickets for the school musical. Adult tickets are \$4.00 and student tickets are \$2.00. She hopes that the total ticket sales will be about \$600 in order to cover expenses. Write an equation in standard form to represent this situation.

Let \( x \) represent the number of adult tickets.
Let \( y \) represent the number of student tickets.

Examples 12 and 13:
Find the \( x \) and \( y \) intercepts of the line that passes through the given point.
(5, 2) and (2, -1)

Summary
What is the standard form?
What do you need to do to graph in standard form?
When given two points what are the steps to write an equation in standard form?