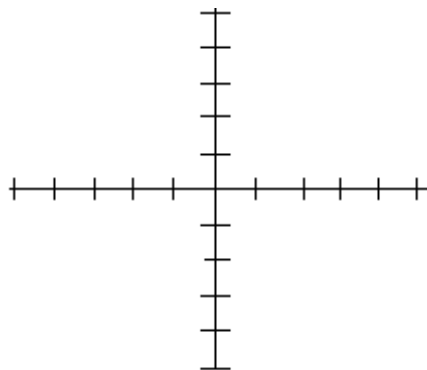


Section 2.2 Linear Equations in Two Variables

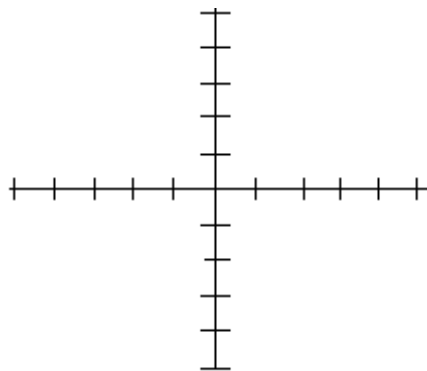
If A and B are not both equal to zero then the solutions to an equation of the form $Ax + By = C$ are points that form a line in the Cartesian Plane. Therefore, any equation that can be written as $Ax + By = C$ is said to be a **linear equation**.

Any equation of the form $Ax + By = C$ where A and B are not both equal to zero is called the **standard form** of a line.

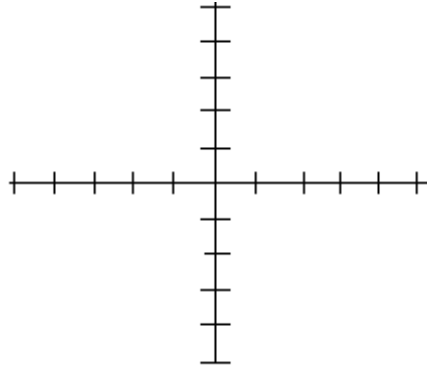
Graph the equation $3x - 6y = 12$



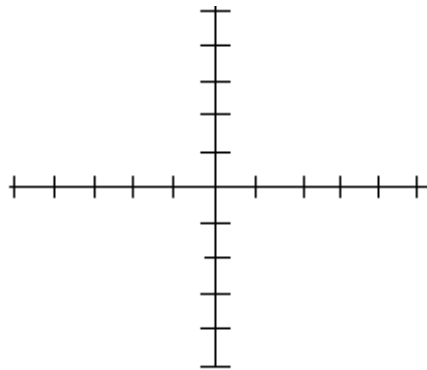
Graph the equation $2x - 3(x - 4) = 2(y - 3)$



What does the graph of the equation $y = 3$ look like?



What does the graph of the equation $x = -2$ look like?



Intercepts:

The points at which the graph of an equation crosses the x -axis are called the **x -intercepts** and are found by setting y equal to zero and solving for x .

The points at which the graph of an equation crosses the y -axis are called the **y -intercepts** and are found by setting x equal to zero and solving for y .

Consider the equation $5x - 2y = 10$.

Find the x and y intercepts of the graph of this equation.

