

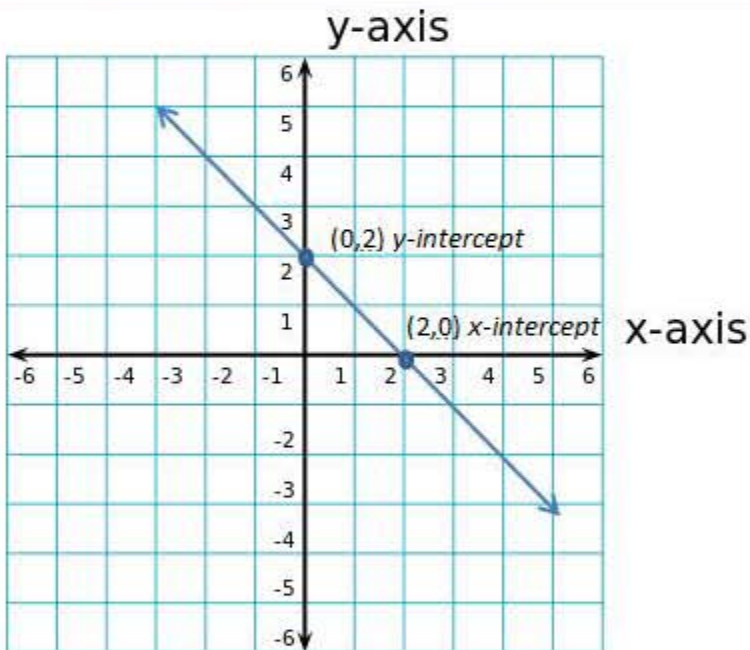
MAT0028 ~ Lesson 19

Work the following examples as you listen to the recorded lecture.

Intercepts

Linear equations can be drawn as straight lines on the graph known as the Rectangular Coordinate System. This graph has two central lines, the y-axis and the x-axis, that help us identify points and lines. Points are identified on the graph by their x and y values as ordered pairs, written (x, y) . For example, the point $(3, 4)$ would be found by moving from the center of the graph 3 spaces to the right and 4 spaces up. When a line crosses an axis, we have an intercept. In the example below, we have two intercepts. The y-intercept is the point where the line crosses the y-axis, $(0, 2)$, and the x-intercept is the point where the line crosses the x-axis, $(2, 0)$.

An intercept is a point where a line crosses an axis.



Definition....

The **y-intercept** of a line is the point where the line **crosses the y axis** in the rectangular coordinate system, therefore $x = 0$.

The **x-intercept** of a line is the point where the line **crosses the x axis** in the rectangular coordinate system, therefore $y = 0$.