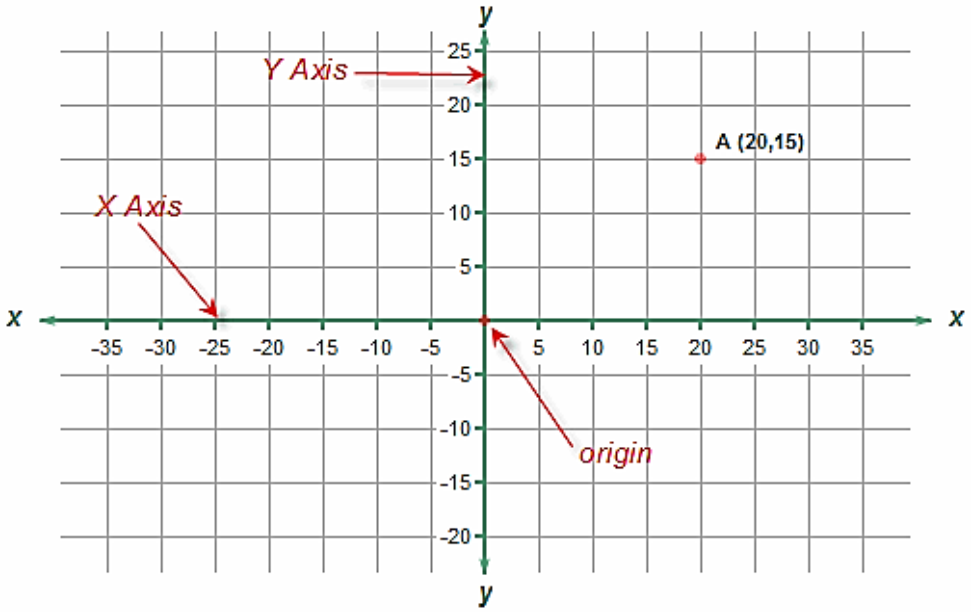
3.2 COORDINATES OF A POINT

To introduce the idea, consider the grid on the right. The columns of the grid are lettered A,B,C etc. The rows are numbered 1,2,3 etc from the top. We can see that the **X** is in box D3; that is, column D, row 3.

	A	B	C	D	E	F
1						
2						
3				X		
4						
5						
6						

D and 3 are called the *coordinates* of the box. It has two parts: the row and the column. There are many boxes in each row and many boxes in each column. But by having both we can find one single box, where the row and column intersect.

In coordinate geometry, points are placed on the "coordinate plane" as shown below. It has two scales - one running across the plane called the "x axis" and another at right angles to it called the y axis. (These can be thought of as similar to the column and row in the paragraph above). The point where the axes cross is called the **origin** and is where both x and y are zero



On the x-axis, values to the right are positive and those to the left are negative.
On the y-axis, values above the origin are positive and those below are negative.

A point's location on the plane is given by two numbers, the first tells where it is on the x-axis and the second which tells where it is on the y-axis. Together, they define a single, unique position on the plane. So in the diagram above, the point A has an x value of 20 and a y value of 15. These are the coordinates of the point A, sometimes referred to as its "rectangular coordinates". **Note** that the order is important; the x coordinate is always the first one of the pair.