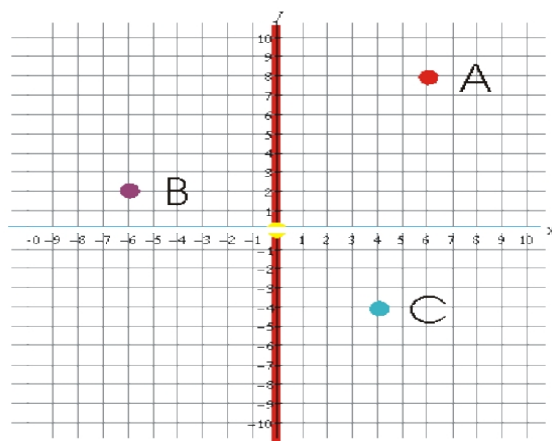# The Coordinate Plane

A coordinate plane is formed by two lines (number lines). One is a horizontal number line going from left to right. This is called the x-axis. The other is a vertical number line going from the bottom to the top. This is called the y-axis. You can remember this if you remember "y goes high". The two number lines intersect at their zero points which forms the ordered pair (0,0) also called the point (0,0). This point is the only point with a fixed (unchanging - always the same) name and it is called the Origin. To name other points a single capital letter is used, examples are point A, point B,and point C.

Ordered Pairs

The first number in the ordered pair is the x-value or x-coordinate and the second is the y-value or y-coordinate. You can help yourself remember the order because it is alphabetical, x comes before y in the alphabet and it comes before y in an ordered pair. In an ordered pair the x-values and y-values can be positive, negative, or zero. Examples of orderd pairs are:
(-3, 4), (5,-8), (0,6), (-7,-7) and, (9,5).

This is called an ordered pair because the order of the numbers is important. If you put the numbers in the wrong spots the point or ordered pair is not always the same as you can see in the example below. The x-coordinate tells how far away from the y-axis a point is and the sign of the coordinate tells which side of the y-axis it is on (positive to the right, negative to the left). The y-coordinate tells how far from the x-axis the point is and the sign of the coordinate tells whether it is above or below the x-axis (positive is above and negative is below). You will see examples of this in the plotting points section later.