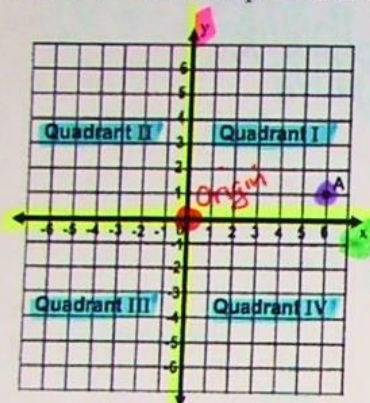


Unit 3 Notes: The Coordinate System

The Coordinate System

The Cartesian coordinate system was developed by the mathematician Descartes during an illness. In 1637. As he lay in bed sick, he saw a fly buzzing around on the ceiling, which was made of square tiles. As he watched he realized that he could describe the position of the fly by the ceiling tile he was on. After this experience he developed the coordinate plane to make it easier to describe the position of objects.



A Cartesian coordinate plane has two intersecting number lines that form axes. The horizontal axis is called the x-axis and the vertical axis is called the y-axis.

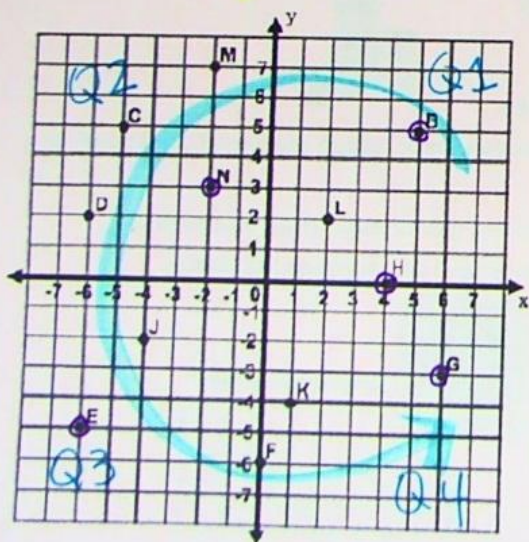
The axes intersect at the point called the origin.

The axes divide the coordinate plane into four

quadrants: QUAD means 4!

A point on the plane can be described by its x and y coordinates. These coordinates are written as an ordered pair: (x, y) .

- The coordinates of the origin are $[0, 0]$
- The coordinates of point A are $[6, 1]$ where 6 and 1 is an ordered pair



1. Name the point that has the coordinates.

- a. $(2, 2)$ L b. $(-6, 2)$ D c. $(1, -4)$
 d. $(0, -6)$ e. $(-4, -2)$ K
 F J

2. Write the coordinates of each point.

- a. B $(5, 5)$ b. G $(6, -3)$ c. E $(-6, -5)$
 d. N $(-2, 3)$ e. H $(4, 0)$

3. In what quadrant is each point located?

- a. C Q2 b. J Q3 c. L Q1
 d. M Q2 e. K Q4

4. In which quadrant would the following points be found:

- 1) $(1, 1)$ Quadrant: Q1 2) $(1, 2)$ Quadrant: Q1 3) $(2, 1)$ Quadrant: Q1
 4) $(-1, 2)$ Quadrant: Q2 5) $(439, -890)$ Quadrant: Q4 6) $(-1, -1)$ Quadrant: Q3