***Introduction to numbers***

- Several types of numbers student must know very well and can be able to identify each of them and provide an example.

➢ All the sets of numbers are called **Real numbers (R)**

**i. Natural numbers (N)**

- This type of numbers was invented to **count objects**, e.g. the number of dogs. These numbers **do not include zero (0)** because it is not used in the counting process but always start from one.

N = {1, 2, 3, 4, 5, …}

**ii. Whole numbers (W)**

- This type of numbers **always start counting from zero.**

W = {0, 1, 2, 3, 4, 5, …}

**iii. Integers (I)**

- The set of **whole numbers (positive numbers)** and their **opposites (negative numbers).**

I = { …, -3, -2, -1, 0, 1, 2, 3, … }

- Numbers that are **less than zero (0)** are called **negative** numbers.

- **Positive** numbers usually have **no sign** with them, e.g. +3 is the same as 3.

- Integers are often represented and positions on a number line.

**iv. Rational numbers (Q)**

- Numbers that **can** be expressed as a **fraction.**

e.g. -2, -1, 3/-5, 0, 0.2, 5/7, 1 ½, 3, 52

**v. Irrational numbers (Q')**

- Numbers that **cannot** be expressed as **fraction.**

e.g. π = 3.14159264..(reading from the calculator) and has infinite ('ikai to e 'osi) number of decimal places.

***Warm up Review:***

**Activity 1.1**

1. Answer **True/False.**

a) π is a member of R

b) 3 is a member of R

c) 0 is a member of N

d) 1.5 is a member of W

e) π is a member of Q

2. Which of the two numbers:

a) 2, -1, is in **W?**

b) -2, $\sqrt{3}$ ,is in **Q'?**

c) 0, π, is in **Q?**

d) 3, 1.7, is in **I?**