NUMBER SYSTEMS

Real Numbers- combination of Rational Number and Irrational Number

Rational Number- Any Number that can be written in the form of p/q

where p and q are integers and q not equal to 0.

Eg- 2/3, 4,-7/5.

This is classified into two parts

Integer- Numbers ranging from minus infinity to plus infinity.This can be further classified
into Natural Number and Whole Number.

Natural Number- Positive integers i.e. 1 to plus infinity.

Whole Number- Positive integers including 0 i.e. 0 to plus infinity.

Irrational Number- Any number that cannot be written in the form of p/q.

Euclid's Division Lemma- Given positive integers a and b, there exist unique integers q and r
satisfying a=bq+r, 0<=r<b.

i.e. remainder is always less than divisor.

To find out HCF of two numbers we use Euclid division lemma.The

Eg To find out HCF of 455 and 42, peform the hcf repetitevely till we get 0 remainder

1. 455= 42*10+35

455- dividend

42- divisor

10- quotient

5- remainder

2. 42=35*1+7

42- dividend

35- divisor

1- quotient

7- remainder

35=7*5+0

35- dividend

7- divisor

5- quotient

0- remainder

 HCF between 455 and 42 is equal to 7 (final divisor)