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Number System Class 9 Notes - Chapter 1

Introduction to Number Systems

Numbers

Number: Arithmetical value representing a particular quantity. The various types of numbers are Natural Numbers, Whole Numbers, Integers, Rational Numbers, Irrational Numbers, Real Numbers etc.

Natural Numbers

Natural numbers**(N)** are positive numbers i.e. 1, 2, 3 ..and so on.

Whole Numbers

Whole numbers **(W)** are 0, 1, 2,..and so on. Whole numbers are all Natural Numbers including '0'. Whole numbers do not include any fractions, negative numbers or decimals.

Integers

Integers are the numbers that includes whole numbers along with the negative numbers.

Rational Numbers

A number 'r' is called a rational number if it can be written in the form p/q, where p and q are integers and q ≠ 0.

Irrational Numbers

Any number that cannot be expressed in the form of p/q, where p and q are integers and q≠0, is an irrational number. Examples: √2, 1.010024563..., e, π

Real Numbers

Any number which can be represented on the number line is a Real Number**(R).** It includes both rational and irrational numbers. Every point on the number line represents a unique real number.

1. Find 8 rational numbers between given two rational numbers.
   (a)   8/7 and 7/9
   (b)   0 and 1
   (c)   2.5 and 3.5
   (d)   -3/4 and -4/5
2. Represent the following no. on the real line or number line.
   (a)   9/13
   (b)   22/7
   (c)   -35/14
   (d)   2.85
   (e)   2.347

Also Solve Ex: 2.1