

MATHEMATICS

CHAPTER NUMBER :~ 1

CHAPTER NAME :~ NUMBER SYSTEMS

SUB TOPIC :~ INTRODUCTION

CHANGING YOUR TOMORROW

LEARNING OUTCOME:~

Students will learn to

- a) Natural Numbers,
- b) Whole Numbers,
- c) Integers,
- d) Rational Numbers,
- e) Equivalent form of Rational numbers and finding Rational Numbers in between two Rational Numbers

<https://www.youtube.com/watch?v=cZH0YnFpjwU>

“Numbers Are Intellectual Witness That Belong Only To Mankind...”

RATIONAL NUMBERS

The numbers which can be expressed in form of p/q form where p and q are integers and q is not equal to 0.

Example:- (a) $2/5$

(b) $-5/7$

EQUIVALENT NUMBERS

The rational numbers whose standard forms are equal are called equivalent rational numbers.

Example:- (a) $\frac{1}{2} = \frac{2}{4} = \frac{5}{10} = \frac{25}{50} = \frac{42}{84}$ and so on.

Rational Numbers Between Two Rational Numbers:

Rational numbers are the numbers which can be expressed in the form of $\frac{p}{q}$ and $q \neq 0$

Example: If 10 rational numbers are to be found between $\frac{2}{7}$ and $\frac{5}{7}$, both the rational numbers are to be multiplied with $\frac{10}{10}$.

Solution:~

$$\frac{2}{7} \times \frac{10}{10} = \frac{20}{70}.$$

$$\frac{5}{7} \times \frac{10}{10} = \frac{50}{70}.$$

10 rational numbers between $\frac{2}{7}$ and $\frac{5}{7}$ are $\frac{21}{70}$, $\frac{22}{70}$, $\frac{23}{70}$, $\frac{24}{70}$, $\frac{25}{70}$, $\frac{26}{70}$, $\frac{27}{70}$, $\frac{28}{70}$, $\frac{29}{70}$, $\frac{30}{70}$.

Evaluation:

Exercise 1.1

Q 2. Find six rational numbers between 3 and 4.

Solution:-

$$3 = 24/8$$

$$4 = 32/8$$

Six rational numbers between 3 and 4
 $25/8, 26/8, 27/8, 28/8, 29/8, 30/8.$

Homework :

Exercise 1.1

AHA:~

1. Find 100 rational numbers between $-2/3$ and $3/2$.
2. Find 50 rational numbers between $1/5$ and $2/5$.

THANKING YOU
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