ONE PAGE SUMMARY

Academic Education GSEB › Class 9 › Mathematics

Number Systems

Master the Basics of Number Systems in Mathematics!

DEFINITION

Number systems are ways to represent numbers using digits. They include whole numbers, fractions, and decimals.

KEY CONCEPTS

Natural Numbers

Natural numbers are the set of positive integers starting from 1, like 1, 2, 3.

Whole Numbers

Whole numbers include all natural numbers and the number 0, such as 0, 1, 2.

Integers

Integers are whole numbers that can be positive, negative, or zero, like -2, 0, 3.

Rational Numbers

Rational numbers can be expressed as a fraction of two integers, like 1/2 or 3.

Irrational Numbers

Irrational numbers cannot be expressed as simple fractions, such as √2 or π.

EXAMPLES

→ Natural numbers: 1, 2, 3, 4

→ Rational number: 3/4, 0.75

→ Irrational number: √3, π

MEMORY TIPS

★ Remember 'N' for Natural numbers: they start from 1.

★ Whole numbers include '0', think of it as a whole.

★ Rational numbers can be written as a fraction: 'R' for 'Ratio'.

COMMON MISTAKES

✗ Confusing rational and irrational numbers.

✗ Forgetting that whole numbers include zero.

✗ Misidentifying negative numbers as natural numbers.

QUICK RECAP

Number systems categorize numbers into groups like natural, whole, integers, rational, and irrational. Understanding these categories helps in identifying and using numbers correctly in various mathematical contexts.