ONE PAGE SUMMARY

Academic Education ICSE › Class 9 › Mathematics

Number Systems

Master the Essentials of Number Systems in Mathematics!

DEFINITION

> Number systems are ways to categorize numbers based on their properties and uses. They include natural numbers, whole numbers, integers, rational numbers, and irrational numbers.

KEY CONCEPTS

Natural Numbers

These are positive integers starting from 1, like 1, 2, 3, and so on.

Whole Numbers

Whole numbers include all natural numbers and zero, such as 0, 1, 2, 3.

Integers

Integers consist of whole numbers and their negative counterparts, like -2, -1, 0, 1, 2.

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

→ The number 5 is a natural number.

→ The number -3 is an integer.

→ The fraction 3/4 is a rational number.

MEMORY TIPS

★ Remember 'N' for Natural starts at 1, 'W' for Whole includes 0.

★ Think of 'I' in Integers as including both positive and negative.

★ Rational numbers are 'ratios' of integers.

COMMON MISTAKES

✗ Confusing rational numbers with irrational numbers.

✗ Overlooking zero in whole numbers.

✗ Assuming all fractions are rational.

QUICK RECAP

Number systems categorize numbers into distinct groups based on their properties. Understanding natural, whole, integers, rational, and irrational numbers is essential for solving various mathematical problems.