

Real Numbers

Chapter 2: Real Numbers · Topic 1

Key Concept

Rational numbers can be expressed as a fraction p/q ($q \neq 0$), including integers, fractions, and terminating or repeating decimals.

Irrational numbers cannot be expressed as a simple fraction, having non-terminating, non-repeating decimals, like $\sqrt{2}$ or π .

Real numbers can be represented on a number line, with every point corresponding to a unique real number.

Understanding real numbers and their properties is essential for algebra, geometry, and higher-level mathematics.

Quick Revision Notes

- Rational numbers: expressible as p/q , $q \neq 0$.
- Includes integers, fractions, terminating decimals.
- Irrational numbers: not expressible as fraction.
- Non-terminating, non-repeating decimals.
- Examples: $\sqrt{2}$, π .
- Real numbers represented on number line.
- Every point = unique real number.
- This is foundation for algebra, geometry.

Practice Questions

- 1 Classify five numbers as rational or irrational.
- 2 Represent $3/4$ on a number line.
- 3 Discuss why $\sqrt{2}$ is irrational.
- 4 List three examples of irrational numbers.
- 5 Discuss the difference between rational and irrational numbers.
- 6 Explain real numbers in your own words.