

IRRATIONAL NUMBERS

Real numbers that cannot be expressed as a ratio of two integers

Irrational Numbers (I)
Famous Constants

NON-ALGEBRAIC

- π (Pi) $\approx 3.14159...$
- e (Euler's Number) $\approx 2.71828...$
- ϕ (Golden Ratio) $\approx 1.618...$

Surds / Roots

NON-PERFECT POWERS

- $\sqrt{2}, \sqrt{3}, \sqrt{5}$
- $\sqrt[3]{7}, \sqrt[4]{10}$
- $\sqrt{1/2}$

Infinite Decimals

NON-REPEATING

- 0.1010010001...
- 1.234567891011...
- No periodic pattern

Decimal Form:

Decimals go on forever without ever repeating a sequence or terminating.

Fraction Form:

Cannot be written as a/b where a and b are integers and $b \neq 0$.