Real Number (R) System

Rational Numbers (Q)

* Can be expressed as the ratio of two integers $\frac{a}{b}$ where b ≠ 0
* Decimal numbers that terminate
* Decimals that repeat
* Integers, whole numbers & natural numbers.
* Examples: $\frac{1}{3}$, $\frac{4}{1}$, -1.24, 8, $0.\overline{27}$, 0

Irrational Numbers ($\bar{Q}$)

* Cannot be expressed as the ratio of two integers $\frac{a}{b}$ where b ≠ 0
* Decimal numbers that do not terminate and have no repeating pattern of digits
* Examples: π, $\sqrt{2}$, $\sqrt{5}$, 2.12112111211112…

Integers (Z)

* Whole numbers and their opposites
* Examples: … -3, -2, -1, 0, 1, 2, 3…

Whole Numbers (W)

* Natural numbers and 0
* Examples: 0, 1, 2, 3…

Natural Numbers (N) (Counting numbers)

* Positive Integers
* Examples: 1, 2, 3…