

THE REAL NUMBER SYSTEM

Middle School Reference Guide

SUBSET 1 Rational Numbers ($\mathbb{Q}$) $1/2$, 0.75 , -5.2 , $4.333\dots$, $\sqrt{25}$

Any number that can be written as a fraction a/b .

SUBSET 2 Integers ($\mathbb{Z}$) -3 , -2 , -1 , 0 , 1 , 2 , 3

Whole numbers and their opposites.

SUBSET 3 Whole Numbers ($\mathbb{W}$) 0 , 1 , 2 , 3 , 4 , 5

Counting numbers including zero.

SUBSET 4 Natural Numbers ($\mathbb{N}$) 1 , 2 , 3 , 4 , $5\dots$

Counting numbers starting at 1.

Terminating Decimals

Decimals that end.

Example: 0.25 , 0.8 , 2.125

Repeating Decimals

Decimals with a pattern.

Example: $0.333\dots$, $0.1212\dots$

Note: Irrational numbers (like π or $\sqrt{2}$) are NOT part of the Rational Number System.