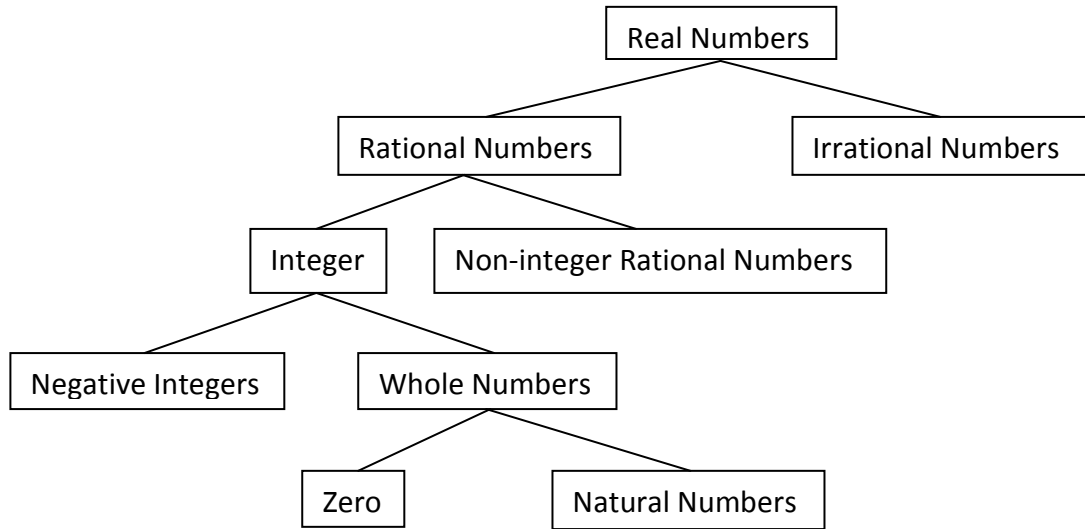
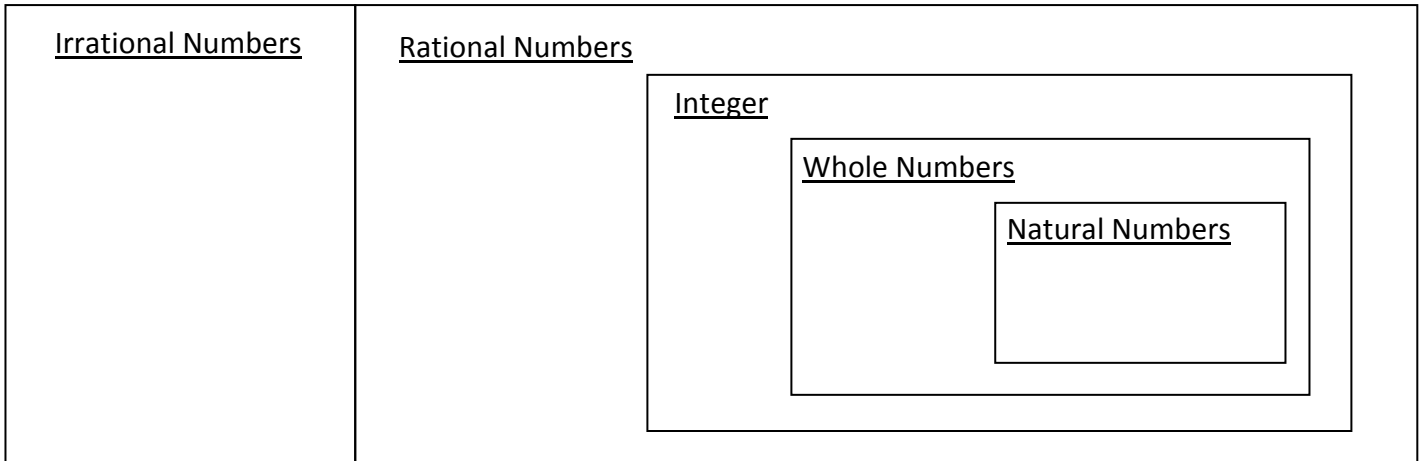


# Real Numbers

**Real Number:** any number that can be represented on a number line.



## Real Numbers



**Rational Numbers:** The Quotient of any two integers (Any number that can be written as a fraction)

**Irrational Numbers:** Any number which is not a rational number (Non-ending, non-repeating decimals)

**Integers:**  $\{\dots - 3, -2, -1, 0, 1, 2, 3, \dots\}$

**Whole Numbers:**  $\{0, 1, 2, 3, 4, \dots\}$

**Natural Numbers:**  $\{1, 2, 3, 4, \dots\}$  (Counting Numbers)

**Example:** Given the set of numbers  $\{-6, -0.5, 4\frac{1}{2}, -96, \sqrt{3}, 0, 9, -\frac{4}{7}, -2.9, \sqrt{7}, -\sqrt{5}\}$

- Natural Numbers: 9
- Whole Numbers: 0, 9
- Integers: -6, -96, 0, 9
- Rational Numbers:  $-6, -0.5, 4\frac{1}{2}, -96, 0, 9, -\frac{4}{7}, -2.9$
- Irrational Numbers:  $\sqrt{3}, \sqrt{7}, -\sqrt{5}$
- Real Numbers: **All** numbers in the set.

Number	Natural	Whole	Integer	Rational	Irrational	Real
-7			✓	✓		✓
-3.5				✓		✓
$2\frac{5}{7}$				✓		✓
108	✓	✓	✓	✓		✓
$\sqrt{5}$					✓	✓
$6\pi$					✓	✓
0		✓	✓	✓		✓
$-\frac{3}{4}$				✓		✓
$23.\overline{61}$				✓		✓
$-\sqrt{3}$					✓	✓
56.24				✓		✓
-209			✓	✓		✓
$12\frac{2}{5}$				✓		✓
$-18\pi$					✓	✓
$\sqrt{36}$	✓	✓	✓	✓		✓
$-2.0\overline{34}$				✓		✓