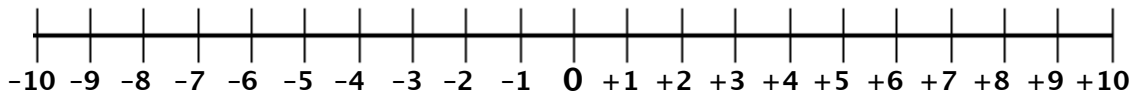


Real Numbers

Real numbers are the rational numbers and all the irrational numbers between them. Whole numbers, natural numbers, integers, rational numbers, and irrational numbers are each a **subset** of real numbers.

Examples: Each real number corresponds to one and only one point on the real number line.



Rational numbers are the integers and all the fractions between them. Any fraction can be written as a decimal, so any decimal that is equivalent to a fraction is also a rational number.

Examples: 1, 2, $2\frac{1}{2}$, 3.75, 5, 6.20

Whole numbers are the non-negative counting numbers. Whole numbers are a subset of integers.

Examples: 0, 1, 2, 3, 4, 5, 6, 7, and so on.

Natural numbers are the positive counting numbers, such as 1, 2, 3, 4, 5, 6, 7, and so on. Natural numbers are contained in the set of whole numbers. This means natural numbers are a subset of the whole numbers, and a subset of integers.

Examples: 1, 2, 3, 4, 5, 6, 7, and so on.

Integers are the set of numbers consisting of the whole numbers and the negative whole numbers.

Examples: ... -3, -2, -1, 0, 1, 2, 3 ...

Irrational numbers are non-terminating, non-repeating decimals. Irrational numbers cannot be written as fractions, such as $\frac{a}{b}$, where a and b are integers, and b is not 0.

Examples: $\pi=3.141592654\dots$, $\sqrt{2}$, $\sqrt{3}$, $\sqrt{\text{non - perfect square}}$