

Vocabulary Unit 1

Module 1: Real Numbers

(1.1) **rational number:** a number that can be written as a ratio in the form a/b where a and b are integers and $b \neq 0$

Examples: decimals, repeating decimals, fractions, integers, whole numbers, perfect square roots

(1.1) **terminating decimal:** has a finite number of digits

Examples: 3.53, 12.401

(1.1) **repeating decimal:** has a block of one or more digits that repeat indefinitely

Examples: 4.222..., $9.\bar{4}$

(1.1) **square root:** the square root of a positive number p is x when $x^2 = p$

Example: $\sqrt[+]{36} = 6$ and -6

(1.1) **principle square root:** \sqrt{x} indicates the positive square root.

Example: $\sqrt{36} = 6$

(1.1) **perfect square:** has square roots that are integers

Examples: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100

(1.1) **cube root:** of a positive number p is x if $x^3 = p$

Example: $\sqrt[3]{8} = 2$

(1.1) **perfect cube:** has cube roots that are integers

Examples: 1, 8, 27, 64, 125

(1.1) **irrational numbers:** cannot be written as a ratio.

Examples: non - terminating, non - repeating decimals, non - perfect square roots

(1.2) **real numbers:** consists of the sets of rational and irrational numbers

Module 2: Exponents and Scientific Notation

(2.2) **scientific notation:** a method of expressing very small or very large numbers as a product of a number greater than or equal to one and less than 10, and a power of 10.

Examples: 3.9×10^3 , 4.14×10^{-3}