

Glossary

Unit 1: Radicals

Algebra The use of numbers and variables to represent a relationship in an equation or expression. For equations, the value(s) of the variable can be determined such that the equation is satisfied.

Algebraic Expression A mathematical expression of numbers and variables that represent a relationship

Binomial A two-term polynomial

Coefficient A number in front of a radical or variable; a variable in front of a radical

Commutative Property When multiplying or adding, the order of the values/variables does not matter.

Distributive Property Used when multiplying a monomial by a binomial or polynomial; the monomial is multiplied by each term in the binomial or polynomial. Also used when multiplying a binomial by a binomial; each term in the first binomial is multiplied by each term in the second binomial (FOIL).

Entire Radical A radical expression with all values/variables under the radical sign

Estimation Making an educated guess about what the answer will be close to

Exact Value A value that has not been rounded (approximated) or estimated

Exponent A superscripted number on the “base” of a power that represents how many times the “base” is multiplied by itself

Extraneous Root A solution that has been determined correctly, yet does not satisfy the original equation when verified

Index The type of root to be taken (the small number in the elbow of the radical sign)

Integers The Natural Numbers, their negatives, and 0

Irrational Number A number that cannot be expressed as a fraction, and that does not terminate, and does not repeat

Mixed Radical A radical expression, usually in simplest form, that has a coefficient in front of the radical sign and a value and/or variable under the radical sign

Monomial A single term polynomial

Natural Numbers The counting numbers starting with 1

Polynomial Several terms, made from a combination of variables and/or numbers, separated by addition or subtraction

Principal Square Root The positive square root

Radical Represents a root, square root ($\sqrt{\quad}$) or n^{th} root ($\sqrt[n]{\quad}$)

Radicand The number under the radical sign

Rational Number A number that can be written in fraction form $\frac{p}{q}$, where p and q are integers and q must not equal zero. Rational Numbers can also be written in decimal form. These decimal numbers terminate or repeat.

Real Numbers Includes the sets of Rational and Irrational Numbers

Restrictions on a Variable Values that are not permitted for the variable because of its position in an equation or expression. For example, variables under the square root sign are typically restricted to 0 and positive real numbers.

Variable A letter or symbol that represents an unknown value

Verify Substituting a solution value into the original equation to check that the left side of the equation matches the right side

Whole Numbers The number 0 and the Natural Numbers