Unit: 1. REAL NUMBERS

VOCABULARY

completing the square	The process used in solving quadratic equations that do not have factorable expressions.
conjugate	Used to rationalize denominators.
discriminant	The radicand $b^2 - 4ac$ of the quadratic formula; used to determine the nature of the roots of a quadratic equation without completing the solution.
double root	Every quadratic equation has two roots; however, in certain cases the two roots are the same number.
extraneous root	In the algebraic process used for solving an equation, a number obtained that is not a root of the original equation.
fractional exponent	An exponent that is a fraction; the numerator represents the power of the number and the denominator represents the index of the root.
general form of quadratic equation	$ax^2 + bx + c = 0$, where a, b, and c are real numbers and the leading coefficient, a, is greater than or equal to one.
imaginary number	A number that involves taking the square root of a negative number.
index	In $\sqrt[3]{8}$, the index is 3. If no index is indicated, the index is understood to be 2.

irrational number	A real number that is not a rational number; can be a radical, a non-repeating, non-terminating decimal, or a designated constant.
principal square root	Every positive real number has two square roots, one positive and one negative. The principal square root is the positive square root and is denoted by the radical sign.
quadratic equation	An equation of the second degree. (See "general form.")
quadratic formula	A formula used to compute the roots of a quadratic equation in general form.
radical	An expression consisting of a phrase and a radical sign over it.
radical equation	An equation in which the variable appears under a radical sign or with a fractional exponent.
radical sign	A symbol indication that an expression is a radical.
radicand	The quantity under a radical sign.
rationalize	To remove the radical in the denominator of an expression without changing the value.
rational number	A real number that can be expressed in the form $\frac{a}{b}$, where a and b are integers and $b \neq 0$.
square root	A number, when raised to the second power, produces the given number.
standard form of quadratric equation	A quadratic equation in the form of $ax^2 + bx + c$, where $a \neq 0$.

vertex form of quadratic function	A quadratic function in the form of $f(x) = a(x-h)^2 + k$, where $a \neq 0$ and (h,k) represents the maximum or minimum value of the function.

Vocab Arcade

INTERNET LINKS

Lesson 3

Radical Rules and Conjugates

Lesson 7

Completing the Square Reviewed

Lesson 8

Quadratic Formula Reviewed

Lesson 10

Completing the Square and Driving the Quadratic Formula