Algebra 1

Mrs. Watanabe

Algebra 1 First Semester Overview

The first quarter we covered the following topics:

Addition and subtraction of fractions

Lines and Segments

Angles, polygons, triangles, and quadrilaterals

Perimeter and circumference

Review of arithmetic

Absolute value

Addition of signed numbers

Rules for addition, adding more than two numbers

Inserting parentheses mentally

The opposite of a number

Area, surface area, and volume

Rules for multiplication and division of signed numbers

Inverse operations

Division by zero

Exchange of factors in multiplication

Conversions of area

Reciprocal and multiplicative inverse

Order of operations

Symbols of inclusion

Evaluation of algebraic expressions

Factors and coefficients

Distributive property

Terms, Like terms and addition of like terms, addition of like terms with exponents

Exponents, including negative exponents and zero as an exponent

Powers of negative numbers and evaluation of powers

Roots

Product rule for exponents

Review of numerical and algebraic expressions

Statements and sentences

Conditional equations

Equivalent equations

Additive and multiplicative properties of equality

Solution of equations

Simplifying decimal equations

Fractional and decimal parts of numbers

Functional notation

Algebraic phrases

Equations with parentheses

Products of prime factors

Statements about unequal quantities

The second quarter we covered the following topics:

Factoring the greatest common factor

Canceling factors

Distributive property with exponents

Negative exponents

Inequalities

Graphical solutions of inequalities

Ratio problems

Trichotomy Axiom

Negated inequalities

Quotient rule for exponents

Addition of like terms in rational expressions

Solving multivariable equations

Least common multiples of algebraic expressions

Addition of rational expressions

Range, median, mode, and mean

Conjunctions

Percent’s less than and greater than 100

Addition of polynomials

Multiplication of polynomials

Cartesian coordinate system and ordered pairs

Graphs of linear equations, vertical, and horizontal lines

Overall average

Power rule for exponents

Conversions of volume

Substitution axiom and solving simultaneous equations by substitution

Division rule for complex fractions

Finite and infinite sets and membership in a set

Rearranging equations before graphing

Addition of algebraic expressions with negative exponents

Percent word problems

Rearranging before substitution

Geometric solids—prisms and cylinders

Subsets of the set of real numbers

Higher order roots

Evaluating using plus and minus from roots in an equation

Product of square roots rule

Repeating decimals