

SSD
Pre-Algebra A
Student Learning Standards

Chapter 1 - The Language of Algebra:

- I will learn to use order of operations to solve equations
- I will learn to use variables to solve algebraic expressions
- I will learn to recognize and apply the properties of addition and multiplication
- I will learn to use the distributive property to simplify and solve equations
- I will learn to solve a variety of open sentences
- I will learn to use inverse operations when solving equations
- I will learn to solve word problems by writing and using equations
- I will learn to evaluate inequalities

Chapter 2 - Integers:

- I will learn to graph integers on a number line
- I will learn how to find the absolute value of a number
- I will learn to recognize the order of and add integers on a number line
- I will learn to use properties to add, subtract, multiply and divide integers
- I will learn to use the distributive property to combine like terms
- I will learn to solve problems involving integers

Chapter 3 – Solving One-Step Equations:

- I will learn to use the addition, subtraction, multiplication and division properties of equality to solve one-step equations
- I will learn to apply the properties of equality to solve problems involving formulas
- I will learn to find the perimeter and area of squares and rectangles
- I will learn to use the addition, subtraction, multiplication and division properties of equality to solve inequalities
- I will learn to solve verbal problems by translating them into equations and inequalities

Chapter 4 – Factors and Fractions:

- I will learn to use divisibility rules to determine if a number is a factor of another number
- I will learn to determine whether or not an expression is a monomial
- I will learn to evaluate and solve expressions using exponents
- I will learn to identify prime and composite numbers
- I will learn to write the prime factors of integers and monomials
- I will learn to find the Greatest Common Factor (GCF) of 2 or more integers or monomials
- I will learn to use the GCF to simplify fractions
- I will learn to find the Lowest Common Multiple (LCM) of two or more numbers
- I will learn to solve problems involving fractions by finding the LCM
- I will learn to find the LCM of algebraic fractions
- I will learn to multiply and divide powers

Chapter 5 – Rationals: Adding and Subtracting Patterns:

- I will learn to identify and compare rational numbers
- I will learn to round decimals and rename them as fractions
- I will learn to add and subtract decimals
- I will learn to add and subtract fractions with like and unlike denominators
- I will learn to solve equations and inequalities involving rational numbers
- I will learn to convert measures within the customary system
- I will learn to add and subtract measures within the customary system

Chapter 6 – Rationals: Multiplying and Dividing Patterns:

- I will learn to write fractions as decimals
- I will learn to estimate products and quotients
- I will learn to multiply and divide fractions and decimals
- I will learn to use the multiplicative inverse when multiplying and dividing fractions
- I will learn to solve equations and inequalities
- I will learn to identify examples of inductive and deductive reasoning
- I will learn to recognize geometric sequences and apply this knowledge to equations
- I will learn to write numbers using scientific notation
- I will learn to compare rational numbers
- I will learn to find the circumference of a circle

Chapter 7 – Solving Equations and Inequalities:

- I will learn to solve a problem by working backwards
- I will learn to solve equations that involve two operations
- I will learn to solve verbal problems by translating them into two-step equations
- I will learn to solve equations with variable on each side
- I will learn to solve equations that involve more than two operations
- I will learn to solve inequalities that involve more than one operation
- I will learn to solve verbal problems involving rational numbers by translating them into inequalities
- I will learn to convert measure within the metric system

SSD
Pre-Algebra B
Student Learning Standards

Chapter 8- Graphing & Equations:

- I will learn to graph a combination of numbers on number lines
- I will learn to locate and graph order pairs on a coordinate graph system
- I will learn to solve two variable equations
- I will learn to solve and graph equations involving slope, slope intercept formulas

Chapter 9- Proportions & Percents:

- I will learn to compare, order, and solve problems involving ratios and rates
- I will learn to solve problems involving proportions
- I will learn to solve problems involving fractions, decimals, and percent
- I will learn to use percent increase/decrease
- I will learn to use estimations to figure percent calculations and interest rates

Chapter 10- Statistics & Graphs:

- I will learn to gather and record data
- I will learn about measures of central tendencies
- I will learn about measures of variation
- I will learn to make stem/leaf, box/whisker, and scatter plots

Chapter 11- Probability:

- I will learn to make tree diagrams
- I will learn about permutations and combinations
- I will learn how to make tables and organize
- I will learn about independent and dependent events

Chapter 12- Geometry:

- I will learn the vocabulary
- I will learn to draw, compare, name and calculate angles
- I will learn to draw, compare, name, and calculate lines
- I will learn to construct segments/angles
- I will learn about transformations
- I will learn about and work with congruent/similar triangles
- I will learn about and work with quadrilaterals
- I will learn about and work polygons
- I will learn about and create tessellations

Chapter 13- Measuring Area & Volume:

I will learn the formulas for measuring and calculating area and volume on parallelograms, triangles, trapezoids, and circles

I will learn to calculate surface area for prisms, cylinders, pyramids, and cones

I will learn to calculate volume for prisms, cylinders, pyramids, and cones

Chapter 14- Right Triangles:

I will learn to calculate squares and square roots

I will learn to create Venn diagrams

I will learn to use real number systems

I will learn and use the Pythagorean theorem

I will learn to graph irrational numbers

I will learn about tangent, sine, cosine, and trigonometric ratios

Chapter 15- Polynomials:

I will learn to add and subtract polynomials

I will learn to work with powers of polynomials

I will learn to multiply polynomials by monomials

I will learn to multiply binomials