Prioritized Curriculum Standards

Math

Algebra 1
Content/ Measurement Topic
Rational Numbers x RNE1- Explain the properties of rational numbers
Components of an Expression x CPE1- Compare the functions of terms, coefficients, and variables in an algebraic expression
Context of an Expression x CTE1- Write an algebraic expression to represent the information presented in a real- world problem x CTE2- Convert measurement units to evaluate expressions x CTE3- Interpret expressions by identifying the de pendent and independent variables
Equations and Inequalities x EI1- Explain why the same amount or value can be added to or subtracted from both sides of an equation or inequality without changing the relationship it represents x EI2- Solve equations and inequalities in one variable x EI3- Express solutions to equations and inequalities in one variable algebraically and visually x EI4- Determine if equations a nd inequalities in one variable have one solution, no solutions, a defined range of solutions, or infinite solutions
Generating Equations and Inequalities x GEI1- Generate equations in two or more variables to represent situations involving relationships b etween quantities x GEI2- Generate inequalities in two or more variables to represent situations involving relationships between quantities
Functional Relationships and Function Notation x FRFN1-

- x LEI3- Describe the defining characteristics of linear inequalities and their graphs in the coordinate plane
- x LEI4- Graph linear inequalities on a coordinate plane

Systems of Equations and Inequalities
- x SEI1- Generate systems of equations and/or inequalities to model real- world situations
- x SEI2- Solve systems of linear equations
- x SEI3- Solve systems of linear inequalities graphically
- x SEI4- Determine whether system of linear equations has no solutions, infinite solutions, one solution, or multiple solutions by using a system of equations or inequalities to model it

Rational Exponents and Radicals
- x RER1- Explain how the definition of fractional exponents is consistent with the properties of in teger exponents
- x RER2- Manipulate expressions involving positive and negative rational exponents (including fractional exponents) and radicals using exponent properties

Adding and Subtracting Polynomial Expressions
- x ASPE1- Simplify polynomials with more than one variable
- x ASPE2- Add and subtract polynomials

Multiplying Polynomial Expressions
- x MDPE1- Multiply polynomials

Factoring Expressions
- x FE1- Factor out a greatest common factor from an expression
- x FE2- Factor second -degree expressions with a leading coefficient of 1
- x FE3- Factor second -degree expressions with non -1 leading coefficients
- x FE4- Factor expressions by recognizing a difference of squares or the square of a binomial

Quadratic Equations and Functions
- x QEF1- Solve quadratic equations in one variable with any leading coefficient
- x QEF3- Graph quadratic equations and functions on a coordinate plane
- x QEF4- Solve quadratic equations to determine the solutions to real- world problems

Graphing Functions
- x GRF1- Graph various types of functions
- x GRF2- Interpret key features of functions
- x GRF3- Explain the relationship between changes in the equation for a function and its graph

Comparing Functions
- x CPF1- Compare properties of two functions expressed differently (algebraically, graphically, numerically in a table of values, or by verbal description)
- x CPF2- Compare the average rates of change for two functions
- x CPF3- Compare the types of growth represented by linear and quadratic functions

Generating Functions

- x GNF1 - Generate linear, quadratic, and exponential functions
- x GNF2 - Generate functions to model real -world situations

Comparing Functions

- x CPF3 - Compare the types of growth represented by linear, quadratic, and exponential functions

Inverse Functions

- x IF1 - Express the inverse of an invertible function algebraically and graphically
- x IF2 - Produce an invertible function from a noninvertible function by restricting the domain

Combining Functions

- x CBF1 - Evaluate the outputs of combined functions
- x CBF2 - Use the graphs of functions to find solutions to syst ems of equations and inequalities

Quadratic Equations and Functions

- x QEF1 - Graph quadratic equations and functions on a coordinate plane
- x QEF2 - Derive the quadratic formula by completing the square for the standard quadratic equation
- x QEF3 - Solve quadratic equations in one variable with any leading coefficient
- x QEF4 - Solve quadratic equations to determine the solutions to real- world problems

Complex Numbers

- x CN1 - Find the conjugates of complex numbers
- x CN2 - Manipulate complex numbers
- x CN3 - Solve second -degree polynomial equations that have complex roots

Multiplying and Dividing Polynomial Expressions

- x MDPE1 - Multiply polynomials
- x MDPE2 - Divide polynomials
- x MDPE3 - Apply the Polynomial Remainder Theorem

Evaluating Polynomials

- x EP1 - Prove polynomial identities
- x EP2 - Simplify higher -degree binomial expansions
- x EP3 - Solve factorable higher -degree polynomial equations

Rational Exponents and Radicals

- x RER1 - Exp

Polynomial, Radical, and Rational Functions

- x PRRF1 - Graph polynomial functions
- x PRRF2 - Graph simple radical functions
- x PRRF3 - Graph rational functions

Exponential and Logarithmic Functions

- x ELF1 - Use exponents and logarithms to solve equations
- x ELF2 - Graph exponential and logarithmic functions

Arithmetic and Geometric Sequences

- x AGS1 - Define an arithmetic or geometric sequence explicitly and recursively
- x AGS2 - Solve real -world problems involving arithmetic or geometric sequences by composing functions

Finite Geometric Sequences

- x FGS1 - Derive the formula for the sum of a finite geometric sequence
- x FGS2 - Use the formula for the sum of a geometric sequence to solve problems

Trigonometric Ratios

- x TR1 - Use trigonometric ratios to solve for missing sides and angles in right triangles

Probability and Combinatorics

- x PC1 - Calculate combinations and permutation s
- x PC2 - Use combinations and permutations in probability calcu

Discrete Probability Distributions

- x DPD1 - Calculate the expected value of a random variable and ake decisions
- x DPD2 - Create a probability distribution for the values of a ariable

Probability Density Functions

- x PDF1- Calculate the z -score of a given data point on a norm on
- x PDF2- Find the probability that a random data point will occur en interval on a normal distribution

Triangle Properties

- TP1- Prove that a line passing through a triangle that is parallel to one side of the triangle forms two overlapping triangles with proportional side lengths

- TP2- Prove that the sum of the interior angles of a triangle is 180°

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Circumscribed and Inscribed Circles of Triangles

- x CICT1 - Construct the circumscribed circle of a triangle
- x CICT2 - Construct the inscribed circle of a triangle

Circle Polygon Constructions

- x CPC1 - Construct a square inscribed within a circle
- x CPC2 - Construct an equilateral triangle inscribed within a circle
- x CPC3 - Construct a regular hexagon inscribed within a circle

Analyzing Geometric Figures

- x AGF1 - Identify the relationship between three -dimensional figures and their two -dimensional cross sections
- x AGF2 - Use geometric figures to describe the properties of real -world objects

Probability

- x P1 - Use two- way tables to model the probabilities of real- world situations
- x P2 - Calculate the probabilities of independent events
- x P3 - Calculate the probabilities of dependent events