

# Prioritized Curriculum Standards

## Math

Algebra 1
Content/ Measurement Topic
Rational Numbers <ul style="list-style-type: none"><li>x RNE1- Explain the properties of rational numbers</li></ul>
Components of an Expression <ul style="list-style-type: none"><li>x CPE1- Compare the functions of terms, coefficients, and variables in an algebraic expression</li></ul>
Context of an Expression <ul style="list-style-type: none"><li>x CTE1- Write an algebraic expression to represent the information presented in a real- world problem</li><li>x CTE2- Convert measurement units to evaluate expressions</li><li>x CTE3- Interpret expressions by identifying the de pendent and independent variables</li></ul>
Equations and Inequalities <ul style="list-style-type: none"><li>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</li><li>x EI2- Solve equations and inequalities in one variable</li><li>x EI3- Express solutions to equations and inequalities in one variable algebraically and visually</li><li>x EI4- Determine if equations a nd inequalities in one variable have one solution, no solutions, a defined range of solutions, or infinite solutions</li></ul>
Generating Equations and Inequalities <ul style="list-style-type: none"><li>x GEI1 - Generate equations in two or more variables to represent situations involving relationships between quantities</li><li>x GEI2 - Generate inequalities in two or more variables to represent situations involving relationships between quantities</li></ul>
Functional Relationships and Function Notation <ul style="list-style-type: none"><li>x FRFN1-</li></ul>

<ul style="list-style-type: none"> <li>x LEI3- Describe the defining characteristics of linear inequalities and their graphs in the coordinate plane</li> <li>x LEI4- Graph linear inequalities on a coordinate plane</li> </ul>
<p>Systems of Equations and Inequalities</p> <ul style="list-style-type: none"> <li>x SEI1- Generate systems of equations and/or inequalities to model real- world situations</li> <li>x SEI2- Solve systems of linear equations</li> <li>x SEI3- Solve systems of linear inequalities graphically</li> <li>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</li> </ul>
<p>Rational Exponents and Radicals</p> <ul style="list-style-type: none"> <li>x RER1- Explain how the definition of fractional exponents is consistent with the properties of integer exponents</li> <li>x RER2- Manipulate expressions involving positive and negative rational exponents (including fractional exponents) and radicals using exponent properties</li> </ul>
<p>Adding and Subtracting Polynomial Expressions</p> <ul style="list-style-type: none"> <li>x ASPE1- Simplify polynomials with more than one variable</li> <li>x ASPE2- Add and subtract polynomials</li> </ul>
<p>Multiplying Polynomial Expressions</p> <ul style="list-style-type: none"> <li>x MDPE1- Multiply polynomials</li> </ul>
<p>Factoring Expressions</p> <ul style="list-style-type: none"> <li>x FE1- Factor out a greatest common factor from an expression</li> <li>x FE2- Factor second -degree expressions with a leading coefficient of 1</li> <li>x FE3- Factor second -degree expressions with non -1 leading coefficients</li> <li>x FE4- Factor expressions by recognizing a difference of squares or the square of a binomial</li> </ul>
<p>Quadratic Equations and Functions</p> <ul style="list-style-type: none"> <li>x QEF1- Solve quadratic equations in one variable with any leading coefficient</li> <li>x QEF3- Graph quadratic equations and functions on a coordinate plane</li> <li>x QEF4- Solve quadratic equations to determine the solutions to real- world problems</li> </ul>
<p>Graphing Functions</p> <ul style="list-style-type: none"> <li>x GRF1- Graph various types of functions</li> <li>x GRF2- Interpret key features of functions</li> <li>x GRF3- Explain the relationship between changes in the equation for a function and its graph</li> </ul>
<p>Comparing Functions</p> <ul style="list-style-type: none"> <li>x CPF1- Compare properties of two functions expressed differently (algebraically, graphically, numerically in a table of values, or by verbal description)</li> <li>x CPF2- Compare the average rates of change for two functions</li> <li>x CPF3- Compare the types of growth represented by linear and quadratic functions</li> </ul>



<p>Generating Functions</p> <ul style="list-style-type: none"> <li>x GNF1 - Generate linear, quadratic, and exponential functions</li> <li>x GNF2 - Generate functions to model real -world situations</li> </ul>
<p>Comparing Functions</p> <ul style="list-style-type: none"> <li>x CPF3- Compare the types of growth represented by linear, quadratic, and exponential functions</li> </ul>
<p>Inverse Functions</p> <ul style="list-style-type: none"> <li>x IF1 - Express the inverse of an invertible function algebraically and graphically</li> <li>x IF2 - Produce an invertible function from a noninvertible function by restricting the domain</li> </ul>
<p>Combining Functions</p> <ul style="list-style-type: none"> <li>x CBF1 - Evaluate the outputs of combined functions</li> <li>x CBF2 - Use the graphs of functions to find solutions to systems of equations and inequalities</li> </ul>
<p>Quadratic Equations and Functions</p> <ul style="list-style-type: none"> <li>x QEF1- Graph quadratic equations and functions on a coordinate plane</li> <li>x QEF2- Derive the quadratic formula by completing the square for the standard quadratic equation</li> <li>x QEF3- Solve quadratic equations in one variable with any leading coefficient</li> <li>x QEF4- Solve quadratic equations to determine the solutions to real-world problems</li> </ul>
<p>Complex Numbers</p> <ul style="list-style-type: none"> <li>x CN1 - Find the conjugates of complex numbers</li> <li>x CN2 - Manipulate complex numbers</li> <li>x CN3 - Solve second -degree polynomial equations that have complex roots</li> </ul>
<p>Multiplying and Dividing Polynomial Expressions</p> <ul style="list-style-type: none"> <li>x MDPE1 - Multiply polynomials</li> <li>x MDPE2- Divide polynomials</li> <li>x MDPE3- Apply the Polynomial Remainder Theorem</li> </ul>
<p>Evaluating Polynomials</p> <ul style="list-style-type: none"> <li>x EP1- Prove polynomial identities</li> <li>x EP2- Simplify higher -degree binomial expansions</li> <li>x EP3- Solve factorable higher -degree polynomial equations</li> </ul>
<p>Rational Exponents and Radicals</p> <ul style="list-style-type: none"> <li>x RER1- Express and simplify radical expressions and equations</li> </ul>

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 triangles to solve the trigonometric ratios, but a 7.51(2m) 22 (14) 112. (n) 4.8 (at) 6 (7) 138. 2 (1) 6 (1)

Probability and Combinatorics

- x PC1 - Calculate combinations and permutations
- x PC2 - Use combinations and permutations in probability calculations

Discrete Probability Distributions

- x DPD1 - Calculate the expected value of a random variable and use it to make decisions
- x DPD2 - Create a probability distribution for the values of a random variable

Probability Density Functions

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

## Triangle Properties

- x 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
- x TP2- Prove that the sum of the interior angles of a triangle is  $180^\circ$
- x

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