COURSE DESCRIPTION

Course Title: Algebra II Honors
Course Number: 00241
Course Prerequisites: Grade of 80% or higher in Algebra I Honors Grade 8 **AND** Proficient or Advanced
score on the Keystone Algebra Exam

Course Description: Algebra II Honors is the second course in the honors mathematics sequence designed for those students to be able to complete calculus prior to entering college. Changes in our society and technology require a strong background in basic algebra skills. This course expands upon the intense study of algebraic theory that was started in Algebra I Honors and will continue in Honors Geometry and additional advanced math courses. This course provides further use of practical problems to apply the theory and connect algebra to the real world. Algebra II Honors is intended for college-bound students who have an aptitude for or interest in mathematics. It provides them with the opportunity to complete an additional year of advanced mathematics. District marking period assessments are required.

Suggested Grade Level: Grade 9
Length of Course: Two Semesters
Units of Credit: 1
PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:
CSPG #50 Mathematics (7-12)
To find the CSPG information, go to CSPG
Certification verified by the WCSD Human Resources Department: ☒Yes   ☐No

WCSD STUDENT DATA SYSTEM INFORMATION

Course Level: Honors & Dual Enrollment (1) GPA +5%
Mark Types: Check all that apply.
                         ☒F – Final Average   ☒MP – Marking Period   ☒EXM – Final Exam

GPA Type: ☐ GPAEL-GPA Elementary   ☐ GPAML-GPA for Middle Level   ☒ NHS-National Honor Society
                         ☒ UGPA-Non-Weighted Grade Point Average   ☒ GPA-Weighted Grade Point Average

State Course Code: 02056
To find the State Course Code, go to State Course Code, download the Excel file for *SCED*, click on SCED 6.0 tab, and choose the correct code that corresponds with the course.

TEXTBOOKS AND SUPPLEMENTAL MATERIALS

Board Approved Textbooks, Software, and Materials:

Title:	*Big Ideas Math - Algebra 2: A Common Core Curriculum*
Publisher:	Big Ideas Learning, LLC.
ISBN #:	978-1-64208-806-9
Copyright Date:	2019
WCSD Board Approval Date:	6/29/2020

Supplemental Materials: *Big Ideas Math - Algebra 1: A Common Core Curriculum* - Big Ideas Learning, LLC., Kuta Software, Get More Math, SAS pdesas.org, IXL, Brainfuse, Graphing Calculator: TI-83 PLUS, Online Calculator: Desmos

Curriculum Document

WCSD Board Approval:

Date Finalized:	5/23/2022
Date Approved:	6/13/2022
Date(s) Revised:	6/12/2023
Implementation Year:	2022-2023

SPECIAL EDUCATION, 504, and GIFTED REQUIREMENTS

The teacher shall make appropriate modifications to instruction and assessment based on a student's Individual Education Plan (IEP), Chapter 15 Section 504 Plan (504), and/or Gifted Individual Education Plan (GIEP).

SCOPE AND SEQUENCE OF CONTENT, AND CONCEPTS

Marking Period 1: Linear Equations, Functions, and Graphs, and Quadratic Functions: Graphs

- Linear Equations (QUICK Review)
- Literal Equations and Formulas
- Linear Graphs (QUICK Review)
- Linear Equations and Scatterplots
- Parent Functions and Transformations: Linear, Absolute Value
- Graphs of Quadratic Functions
- Transformations of Quadratic Functions
- Characteristics of Quadratic Functions
- Models of Quadratic Functions
- **Marking Period 1 Review and Assessment**

Marking Period 2: Quadratic Equations, Inequalities and Complex Numbers, and Polynomial Functions

- Quadratic Solutions: Graphs, Square Root Property, Factors
- Quadratic Functions: Factored Form
- Square Roots (Review)
- Complex Numbers
- Quadratic Equation Solution Methods: Completing the Square, Quadratic Formula
- Quadratic Inequalities
- Graphs of Polynomial Functions
- Polynomials: Addition, Subtraction, Multiplication
- Division of Polynomials
- Polynomial Factoring
- Polynomial Equations and Inequalities
- The Fundamental Theorem of Algebra
- Transformations of Polynomial Functions
- **Marking Period 2 Review and Assessment**

Marking Period 3: Rational Exponents and Radical Functions, Exponential and Logarithmic Functions

- nth Roots and Rational Exponents
- Properties of Rational Exponents and Radicals
- Graphs of Radical Functions
- Radical Equations and Inequalities
- Function Operations
- Inverses of Functions
- Exponential Growth and Exponential Decay Functions
- The Natural Base e
- Logarithms and Logarithmic Functions
- Exponential and Logarithmic Equations (SIMPLE)
- **Marking Period 3 Review and Assessment**

Marking Period 4: Rational Functions, Sequences, and Probability

- Rational Expressions: Simplification, Multiplication, Division
- Rational Expressions: Addition, Subtraction
- Rational Equations
- Sequences
- Arithmetic Sequences
- Geometric Sequences
- Sample Spaces and Probability
- Odds
- Independent and Dependent Events
- Compound Probability
- Permutations and Combinations
- **Marking Period 4 Review and Assessment**

Standards/Eligible Content and Skills

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
QUICK Review: Solve linear equations: Multi-Step, Variables on Both Sides, Absolute Value	A1.1.2.1.1 A1.1.2.1.2 A1.1.2.1.3	MP1
Solve a literal equation/formula for a given variable	A2.1.3.2.2	MP1
Determine how a change in one variable relates to a change in the second variable (e.g., y = 4/x; if x doubles, what happens to y?)	A2.1.3.2.1	MP1
QUICK Review: Graph linear and absolute value functions: Table of values, y = mx + b (Slope-Intercept)	A1.1.2.1.1 A1.1.2.1.3 A1.2.2.1.1 A1.2.2.1.2 A1.2.2.1.3 A1.2.2.1.4	MP1
Review: Write a linear equation from a graph	A1.2.1.2.1 A1.2.1.2.2	MP1
Draw, identify, find, interpret, and write an equation for a line of best fit for a scatterplot	A2.2.3.1.1	MP1
Make predictions using the equations or graphs of lines of best fit	A2.2.3.1.1	MP1
Identify a function family: Constant, Linear, Absolute Value, Quadratic	A2.2.2.2 A2.2.2.2.1	MP1
Graph and describe transformations of linear functions and absolute value: Translation, Reflection, Stretch, Shrink, Combination	A1.2.1.2.2 A2.2.2.2 A2.2.2.2.1	MP1
Write functions representing transformations for linear and absolute value functions	A1.2.1.2.1 A1.2.1.2.2	MP1
Identify characteristics of quadratic functions: Parent Function, Vertex, Axis of Symmetry, Behavior of the Graph	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.2.1 CC.2.2.HS.C.4	MP1
Graph and use quadratic functions in the form $f(x) = ax^2$	A2.2.2.1.1	MP1
Compare $f(x) = ax^2$ to the parent $f(x) = x^2$	A2.2.2.2.1 CC.2.2.HS.C.4 CC.2.2.HS.C.5	MP1
Graph and use quadratic functions in the form $f(x) = ax^2 + c$	A2.2.2.1.1	MP1
Compare $f(x) = ax^2 + c$ to the parent $f(x) = x^2$	A2.2.2.2.1 CC.2.2.HS.C.4 CC.2.2.HS.C.5	MP1
Graph and use quadratic functions in the form $f(x)= ax^2 + bx + c$	A2.2.2.1.1	MP1

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PLANNED INSTRUCTION

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Find the axis of symmetry and vertex of quadratic functions in the form $f(x) = ax^2 + bx + c$	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.2.1 CC.2.2.HS.C.4	MP1
Determine whether a quadratic function in the form $f(x) = ax^2 + bx + c$ has a maximum/minimum value and find the value	A2.2.2.1.3	MP1
Graph and use quadratic functions in the form $f(x) = a(x - h)^2 + k$	A2.2.2.1.1	MP1
Compare $f(x) = a(x - h)^2 + k$ to the parent $f(x) = x^2$	A2.2.2.2.1 CC.2.2.HS.C.4 CC.2.2.HS.C.5	MP1
Solve real-world and mathematical problems involving quadratic functions	A2.2.2.1.1 CC.2.2.HS.C.5	MP1
Describe and graph transformations of quadratic functions: Reflections in the x- and y-axis, Horizontal Stretches and Shrinks, Vertical Stretches and Shrinks	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.2.1 CC.2.2.HS.C.4	MP1
Write a rule for a transformed quadratic function from descriptions	A2.2.2.1.1	MP1
Write and solve a function that models a real-world and mathematical problem	A2.2.2.1.1 CC.2.2.HS.C.5	MP1
Graph a quadratic function in standard form; find and label the vertex and axis of symmetry	A2.2.2.1.1 A2.2.2.1.1 A2.2.2.2.1 CC.2.2.HS.C.4	MP1
Find the minimum/maximum values of quadratic functions in real-world and mathematical problems in standard form	A2.2.1.1.4 A2.2.2.1.3 CC.2.2.HS.C.5	MP1
Describe and graph transformations of quadratic functions: Vertex, Axis of Symmetry, Minimum/Maximum, Domain/Range, Positive/Negative Intervals, Increases/Decreases	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.2.1 CC.2.2.HS.C.4	MP1
Graph a quadratic function in intercept form: $f(x) = a(x - p)(x - q)$	A2.2.2.1.1	MP1
Solve real-world and mathematical quadratic function modeled problems expressed in intercept form	CC.2.2.HS.C.5	MP1
Write quadratic functions: From a Table/Graph, Using a Vertex and a Point, Using a Point and x-intercepts	A2.2.2.1.1	MP1
Marking Period 1 Review and Assessment		**MP1**
• Review and demonstrate knowledge of Linear Equations, Functions, and Graphs		MP1

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
• Review and demonstrate knowledge of Quadratic Functions: Graphs		MP1
Solve quadratic equations by graphing	A2.1.3.1	MP2
Solve quadratic equations using the Square Root Property	A2.1.3.1.2	MP2
Factor quadratic expressions: GCF, Difference of Squares, Trinomial Squares	A2.1.2.2.1	MP2
Solve quadratic equations by factoring	A2.1.3.1.1	MP2
Find the zero(s) of a quadratic function	A2.2.1.1.4 A2.2.2.1.1	MP2
Solve real-world and mathematical problems using quadratic equations	A2.1.3.1 A2.1.3.1.1 A2.1.3.1.2 CC.2.2.HS.D.10	MP2
Review: Simplify Square Roots	A1.1.1.1.2 A2.1.2.1	MP2
Find square roots of negative numbers using the imaginary unit i	A2.1.1.1.1	MP2
Determine values for the equality of two complex numbers	A2.1.1.1.1	MP2
Add, subtract, and multiply complex numbers with solutions in the form a + bi	A2.1.1.2.1 A2.1.1.2.2	MP2
Use operations with complex numbers to model and solve real-world and mathematical problems	CC.2.1.HS.F.6	MP2
Solve quadratic equations that contain complex number solutions	A2.1.1.1.1 A2.1.1.1.2 A2.1.1.2.1 A2.1.2.1.1	MP2
Find the complex zeros of quadratic functions	A2.1.3.2.2 A2.2.1.1.4 A2.2.2.1.1	MP2
Solve perfect square trinomial equations using square roots	A2.1.1.1 A2.1.2.1.2	MP2
Solve quadratic equations by completing the square	A2.1.1.1 A2.1.2.1.2 A2.1.2.2.1	MP2
Write quadratic functions in vertex form then identify the vertex	A2.1.2.2.1 A2.2.1.1.4 A2.2.2.1.1	MP2
Solve quadratic equations using the Quadratic Formula: Two Real Solutions, One Real Solution, Two Imaginary Solutions	A2.1.3.1.1	MP2
Use the discriminant to determine the number and type of solutions of a quadratic equation	CC.2.2.HS.D.1	MP2

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Find a possible pair of integer values of a and c and write an equation so that the quadratic equation in standard form has the given solution(s): Two Real Solutions, One Real Solution, Two Imaginary Solutions	A2.1.3.1.1	MP2
Solve quadratic equations using any method: Square Root Method, Factoring, Completing the Square, Quadratic Formula	A2.1.3.1 A2.1.3.1.1 A2.2.2.1.1	MP2
Solve real-world and mathematical problems using any method for quadratic equations	A2.1.3.1.1 A2.1.3.2.2 A2.2.1.1.4 A2.2.2.1.1 CC.2.2.HS.D.10	MP2
Graph quadratic inequalities in two variables	CC.2.2.HS.D.10	MP2
Solve quadratic inequalities in one variable: Graphing(coordinate plane/graphing calculator), Algebraically	CC.2.2.HS.D.10	MP2
Identify polynomial functions: Degree, Type, Leading Coefficient	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4	MP2
Evaluate polynomial functions	CC.2.2.HS.D.2	MP2
Describe the end behavior of polynomial functions	A2.2.1.1.4	MP2
Graph polynomial functions using tables/graphing calculators to identify increasing and decreasing intervals	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4	MP2
Sketch the graphs of polynomial functions from given characteristics	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4	MP2
Add, subtract, and multiply polynomial expressions	A2.1.2.2	MP2
Write and simplify polynomial expressions from real-world and mathematical problems	A2.1.2.2 CC.2.2.HS.D.10	MP2
Use long division to divide polynomials	A2.1.2.2	MP2
Use synthetic division to divide polynomials by (x – a)	A2.1.2.2	MP2
Use the Remainder Theorem to evaluate polynomials with synthetic division	A2.1.2.2 CC.2.2.HS.D.5	MP2
Factor expressions: Grouping, Sum and Difference of Cubes, Quadratic Form	A2.1.2.2.1	MP2
Factor polynomials completely: GCF, Difference of Squares, Trinomial Squares, Grouping, Sum and Difference of Cubes	A2.1.2.2.1	MP2
Use the Factor Theorem to determine whether a binomial is a factor of a polynomial	CC.2.2.HS.D.5	MP2
Solve polynomial equations by factoring	A2.1.3.1.1	MP2

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Find the real zeros of polynomial functions and sketch the graphs of the functions	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4 CC.2.2.HS.D.5	MP2
Solve polynomial inequalities by graphing	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4	MP2
Use the Rational Root Theorem to find all real solutions/zeros of polynomial equations/functions	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4 CC.2.2.HS.D.5 CC.2.2.HS.D.10	MP2
Use given zeros to write polynomial functions of least degree that have rational coefficients and leading coefficients of 1	CC.2.2.HS.D.5	MP2
Use the Fundamental Theorem of Algebra to determine the number of solutions/zeros for polynomial equations	A2.1.3.1.1 CC.2.2.HS.D.5	MP2
Use the Complex Conjugates Theorem and given zeros to write polynomial functions of least degree that have rational coefficients and leading coefficients of 1	CC.2.2.HS.D.5	MP2
Use Descartes' Rule of Signs to determine the possible numbers of positive real zeros, negative real zeros, and imaginary zeros for polynomial functions	CC.2.2.HS.D.5	MP2
Find all the (complex) zeros of polynomial equations/functions	A2.2.1.1.4 A2.2.2.1.1 A2.2.2.1.3 A2.2.2.1.4 CC.2.2.HS.D.5	MP2
Describe and graph the transformations of represented polynomial functions	A2.2.2.2.1	MP2
Write a rule for a function that represents indicated transformations	A2.2.2.1.1 A2.2.2.2.1	MP2
Marking Period 2 Review and Assessment		**MP2**
• Review and demonstrate knowledge of Quadratic Equations and Inequalities, and Complex Numbers		MP2
• Review and demonstrate knowledge of Polynomial Functions		MP2
Find the nth root of numbers	A2.1.2.1.1 CC.2.2.HS.D.2	MP3
Evaluate expressions with rational exponents	A2.1.2.1.1 CC.2.2.HS.D.2	MP3

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Approximate expressions with rational exponents using a calculator	A2.1.2.1.2 CC.2.2.HS.D.2	MP3
Solve equations using nth roots	A2.1.3.1.2	MP3
Use nth roots to solve real-world and mathematical problems	A2.1.2.1.1 CC.2.1.HS.F.1	MP3
Use properties of rational exponents to simplify expressions	A2.1.2.1.1 A2.1.2.1.2 A2.1.2.1.3 CC.2.2.HS.D.2	MP3
Use properties of radicals to simplify expressions: Product Property, Quotient Property	A2.1.2.1 CC.2.2.HS.D.2	MP3
Rationalize binomial denominators using conjugates	A2.1.2.1 CC.2.2.HS.D.2	MP3
Add and subtract like radicals and roots	A2.1.2.1 CC.2.2.HS.D.2	MP3
Simplify variable radical expressions	A2.1.2.1 CC.2.2.HS.D.2	
Graph radical functions	A2.2.2.1.4	MP3
Identify the characteristics of radical functions: Domain, Range, Increasing/Decreasing	A2.2.2.2.1 A2.2.1.1.4	MP3
Describe and graph the transformation of radical functions: Horizontal Translation, Vertical Translation, Reflection, Horizontal Stretch/Shrink, Vertical Stretch/Shrink	A2.2.2.2.1	MP3
Write transformed radical functions from descriptions	CC.2.2.HS.D.7	MP3
Identify extraneous solutions in radical equations	A2.1.3.1.2	MP3
Solve an equation with one radical; check the solutions	A2.1.3.1.2	MP3
Solve an equation with two radicals; check the solutions	A2.1.3.1.2	MP3
Solve an equation with a rational exponent; check the solutions	A2.1.3.1.2	MP3
Solve real-world and mathematical problems using radical equations	A2.1.3.1.2	MP3
Solve radical inequalities	A2.1.3.1.2 CC.2.2.HS.D.10	MP3
Add, subtract, multiply, and divide functions	CC.2.2.HS.D.2	MP3
Evaluate functions	CC.2.2.HS.D.2	MP3
Compose functions	CC.2.2.HS.D.2	MP3
Write a rule for a composite function	CC.2.2.HS.D.2	MP3
Find the inverse of a function: Linear, Non-linear	A2.2.1.1.3	MP3
Determine if two functions are inverses by comparing their tables of values/graphing calculator	A2.2.1.1.3	MP3
Determine whether an exponential function represents exponential growth or exponential decay	A2.2.1.1.4	MP3

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Graph exponential growth and exponential decay functions	A2.2.2.1.2	MP3
Apply exponential growth and exponential decay formulas in real-world and mathematical problems: General Exponential Model, Compound Interest	A2.1.3.1.4	MP3
Simplify natural base e expressions	A2.1.2.1.4	MP3
Determine whether a natural base e function represents exponential growth or exponential decay; graph the function	A2.2.1.1.4	MP3
Apply exponential growth and exponential decay formulas in real-world and mathematical problems: Continuously Compounded Interest	A2.1.3.1.4	MP3
Convert between exponential and logarithmic forms	A2.1.2.1.4 A2.2.2.1.4	MP3
Evaluate common and natural logarithmic expressions	A2.1.2.1.4	MP3
Solve **SIMPLE** logarithmic equations: Common, Natural	A2.1.3.1.3 A2.2.2.1.2	MP3
Marking Period 3 Review and Assessment		**MP3**
• Review and demonstrate knowledge of Rational Exponents and Radical Functions		MP3
• Review and demonstrate knowledge of Exponential and Logarithmic Functions		MP3
Simplify rational expressions	A2.1.2.2.2	MP4
Multiply and divide rational expressions	A2.1.2.2.2	MP4
Model and simplify rational expressions of real-world and mathematical problems with multiplication and division	A2.1.2.2.2 CC.2.2.HS.D.10	MP4
Find a Least Common Multiple (LCM) of rational expressions	A2.1.2.2.2	MP4
Add and subtract rational expressions with like and unlike denominators	A2.1.2.2.2	MP4
Model and simplify rational expressions of real-world and mathematical problems with addition and subtraction	A2.1.2.2.2 CC.2.2.HS.D.10	MP4
Simplify complex fractions	A2.1.3.1.2	MP4
Solve rational equations: Cross Multiplying, Using the Least Common Denominator (LCD)	A2.1.3.1.2	MP4
Solve rational equations with extraneous solution(s)	A2.1.3.1.2	MP4
Model and solve real-world and mathematical problems using rational equations: Mixture, Work-rate	A2.1.3.1.2 CC.2.2.HS.D.10	MP4
Write terms in sequence notation from a given function	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Identify and describe patterns in a sequence	A2.2.1.1.1 A2.2.1.1.2	MP4

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Graph a sequence	A2.2.1.1.1 A2.2.1.1.2	MP4
Write a rule for the nth term of a sequence	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Identify and describe an arithmetic sequence	A2.2.1.1.1 A2.2.1.1.2	MP4
Write and use a rule for the nth term of an arithmetic sequence given a sequence	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Write and graph a rule for the nth term of an arithmetic sequence given a term and the common difference	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Write a rule for the nth term of an arithmetic sequence given two terms from a list, graph, and table of values	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Identify and describe a geometric sequence	A2.2.1.1.1 A2.2.1.1.2	MP4
Write and use a rule for the nth term of a geometric sequence given a sequence	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Write and graph a rule for the nth term of a geometric sequence given a term and the common ratio	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Write a rule for the nth term of a geometric sequence given two terms from a list, graph, and table of values	A2.2.1.1.1 A2.2.1.1.2 CC.2.2.HS.C.3	MP4
Find the indicated number of terms of a sequence given the first term and a rule	A2.2.1.1.1 A2.2.1.1.2	MP4
Review: Sample Spaces	A2.2.3.2	MP4
Review: Find theoretical and experimental probabilities	A2.2.3.2	MP4
Identify and determine the odds in favor and/or against occurring	A2.2.3.2.2	MP4
Use odds to find probability and use probability to find odds	A2.2.3.2.2	MP4
Determine whether events are independent events	A2.2.3.2.3 CC.2.4.HS.B.6	MP4
Find probabilities of independent and dependent events	A2.2.3.2.3 CC.2.4.HS.B.6	MP4
Find conditional probabilities	A2.2.3.2.3 CC.2.4.HS.B.6	MP4
Use probability for independent and dependent events to predict outcomes	A2.2.3.2.3 CC.2.4.HS.B.6	MP4
Use the concepts of independence and conditional probability to interpret data	A2.2.3.2 CC.2.4.HS.B.6	MP4

Performance Indicator	PA Core Standard and/or Eligible Content	Marking Period Taught
Find the probabilities of compound events: Disjoint Events(Mutually Exclusive), Overlapping Events	A2.2.3.2 CC.2.4.HS.B.7	MP4
Apply the rules of probability to compute probabilities of compound events in a uniform probability model	A2.2.3.2 CC.2.4.HS.B.7	MP4
Use probability for compound events to predict outcomes	A2.2.3.2.3 CC.2.4.HS.B.7	MP4
Use the Fundamental Counting Principal to determine the number of outcomes	A2.2.3.2.1	MP4
Find the number of permutations	A2.2.3.2.1	MP4
Find the number of combinations	A2.2.3.2.1	MP4
Use permutations and combinations to find probabilities of real-world and mathematical problems	A2.2.3.2.1	MP4
Marking Period 4 Review and Assessment		**MP4**
• Review and demonstrate knowledge of Rational Functions		MP4
• Review and demonstrate knowledge of Sequences		MP4
• Review and demonstrate knowledge of Probability		MP4

ASSESSMENTS

PDE Academic Standards, Assessment Anchors, and Eligible Content: The teacher must be knowledgeable of the PDE Academic Standards, Assessment Anchors, and Eligible Content and incorporate them regularly into planned instruction.

Formative Assessments: The teacher will utilize a variety of assessment methods to conduct in-process evaluations of student learning.

Effective formative assessments for this course include:
Suggested but not limited to:

- Pre-assessments of prior knowledge (e.g., Entrance cards or KWL chart)
- Bellringers/Problems of the Day (PODs)
- Discussions
- Exit ticket
- Teacher observations/Questioning
- Graphic organizers (e.g., Venn Diagrams, word mapping, webbing, KWL chart, etc.)
- Outlining
- Cooperative learning
- Written work
- Quizzes
- Oral response
- Self-evaluation
- Homework
- Summarizing
- Note-taking

Summative Assessments: The teacher will utilize a variety of assessment methods to evaluate student learning at the end of an instructional task, lesson, and/or unit.

Effective summative assessments for this course include:
Suggested but not limited to:

- Performance assessment
- Chapter/unit tests
- Quizzes
- Marking period assessments
- Projects
- Student presentations