OCS Math 2 Priority Standards

NUMBER & QUANTITY	
NC.M2.N-CN.1	Know there is a complex number i such that $i^2 = -1$, and every complex number has the form a + bi where a and b are real numbers.
ALGEBRA	
NC.M2.A-SSE.1	Interpret expressions that represent a quantity in terms of its context. a. Identify and interpret parts of a quadratic, square root, inverse variation, or right triangle trigonometric expression, including terms, factors, coefficients, radicands, and exponents. b. Interpret quadratic and square root expressions made of multiple parts as a combination of single entities to give meaning in terms of a context.
NC.M2.A-APR.1	Extend the understanding that operations with polynomials are comparable to operations with integers by adding, subtracting, and multiplying polynomials.
NC.M2.A-CED.3	Create systems of linear, quadratic, square root, and inverse variation equations to model situations in context.
NC.M2.A-REI.4	Solve for all solutions of quadratic equations in one variable. a. Understand that the quadratic formula is the generalization of solving $ax^2 + bx + c$ by using the process of completing the square. b. Explain when quadratic equations will have non-real solutions and express complex solutions as $a \pm bi$ for real numbers a and b.
NC.M2.A-REI.11	Extend the understanding that the x-coordinates of the points where the graphs of two square root and/or inverse variation equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$ and approximate solutions using graphing technology or successive approximations with a table of values.
FUNCTIONS	
NC.M2.F-IF.9	Compare key features of two functions (linear, quadratic, square root, or inverse variation functions) each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions).
NC.M2.F-BF.3	Understand the effects of the graphical and tabular representations of a linear, quadratic, square root, and inverse variation function f with $k \cdot f(x)$, $f(x) + k$, $f(x + k)$ for specific values of k (both positive and negative).
GEOMETRY	
NC.M2.G-CO.5	Given a geometric figure and a rigid motion, find the image of the figure. Given a geometric figure and its image, specify a rigid motion or sequence of rigid motions that will transform the pre-image to its image.
NC.M2.G-CO.9	Prove theorems about lines and angles and use them to prove relationships in geometric figures including: • Vertical angles are congruent. • When a transversal crosses parallel lines, alternate interior angles are congruent. • When a transversal crosses parallel lines, corresponding angles are congruent. • Points are on a perpendicular bisector of a line segment if and only if they are equidistant from the endpoints of the segment. • Use congruent triangles to justify why the bisector of an angle is equidistant from the sides of the angle.
NC.M2.G-CO.10	Prove theorems about triangles and use them to prove relationships in geometric figures including: • The sum of the measures of the interior angles of a triangle is 180º. • An exterior angle of a triangle is equal to the sum of its remote interior angles. • The base angles of an isosceles triangle are congruent. • The segment joining the midpoints of two sides of a triangle is parallel to the third side and half the length.

NC.M2.G-SRT.4	Use similarity to solve problems and to prove theorems about triangles. Use theorems about triangles to prove relationships in geometric figures. • A line parallel to one side of a triangle divides the other two sides proportionally and its converse. • The Pythagorean Theorem
NC.M2.G-SRT.8	Use trigonometric ratios and the Pythagorean Theorem to solve problems involving right triangles in terms of a context.
NC.M2.G-SRT.12	Develop properties of special right triangles (45-45-90 and 30-60-90) and use them to solve problems.
STATISTICS & PROBABILTY	
NC.M2.S-CP.5	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.
NC.M2.S-CP.8	Apply the general Multiplication Rule P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in context. Include the case where A and B are independent: P(A and B) = P(A) P(B).