

Math - Standard

Math - Standard Courses

Algebra, Functions, and Data Analysis

This course is designed for students who have completed Algebra 1 but would benefit from time to further develop algebraic concepts prior to taking Algebra 2. Students will study functions and their behaviors, data analysis, probability, and experimental design. Data will be generated by practical applications arising from science, business, and finance.

Credits 1

Grades

10, 11, 12

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School

Brentsville District High School

Colgan High School

Forest Park High School

Freedom High School

Gainesville High School

Gar-Field High School

Hylton High School

Independence Nontraditional High School

Osborn Park High School

Patriot High School

Potomac High School

Unity Reed High School

Woodbridge High School

Prerequisites

[Algebra 1](#)

Notes

A student may not receive credit for this course after receiving credit for Algebra 2.

Algebra 1

Success in Algebra 1 is widely considered to be a determining factor in success in upper-level mathematics coursework. The skills in Advanced Algebra 1 build on algebraic thinking which students have experienced in kindergarten through middle school. Algebra 1 content includes arithmetic concepts, proportional reasoning, and functions. Graphing utilities (calculators, computers, and other technology tools) will be used to assist in teaching and learning. At the end of the year, students will take the Algebra 1 Standards of Learning test.

Credits 1

Grades

9

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School

Brentsville District High School

Colgan High School

Forest Park High School

Freedom High School

Gainesville High School

Gar-Field High School

Hylton High School

Independence Nontraditional High School
Osborn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Prerequisites

Math 7 Extended **or** Math 8 (Pre-Algebra)

Algebra 1, Parts 1 and 2

Algebra 1, in two parts, is offered for students who need additional time to complete the Algebra 1 curriculum. These two courses employ an interactive, hands-on approach to teaching Algebra concepts. This two-part course uses graphing technology, the data cycle, and contextual applications as the platform for learning Algebra. Emphasis is placed on making connections in Algebra to arithmetic, geometry, and statistics. Algebra 1, Part 1 and Algebra 1, Part 2 are each year-long classes. Schools may double block the courses so that they meet every day for a full block of time over the full year. This gives students the chance to earn the first math credit by the end of the 9th grade year in addition to an elective credit for Part 1. Schools may allow students to take Part 1 in the 9th grade year and Part 2 in the 10th grade. This course has an associated Standards of Learning (SOL) test to be taken at the conclusion of Algebra 1, Part 2.

Credits 1

Elective Credit for Part 1 and 1 Math Credit for Part 2 when student has passed both parts

Grades

9, 10

Schools

Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osborn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Prerequisites

Math 8 (Pre-Algebra)

Notes

Students with disabilities eligible for credit accommodations receive two math credits for completing both courses.

Algebra 2

All students preparing for postsecondary and Advanced technical studies are expected to achieve the Algebra 2 standards. Emphasis will be placed on practical applications and modeling throughout the course of study. Technology tools will be used to assist in teaching and learning. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements. Algebra 2 is required for Advanced Studies Diploma.

Credits 1

Grades

9, 10, 11, 12

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School

Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osborn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Prerequisites

[Algebra 1](#)

Algebra 3 with Trigonometry

Algebra 3 with Trigonometry extends both Algebra and Trigonometry topics. Emphasis is on functions and their inverses, equations and inequalities, graph theory, matrices, sequences and series, conic sections, and logarithms. Trigonometry topics include triangular and circular definitions of the trig functions, trig identities, and solutions of trig equations. This course does not meet the prerequisite for Calculus AB or BC.

Credits 1

Grades

11, 12

Schools

Battlefield High School
Brentsville District High School
Colgan High School
Forest Park High School
Freedom High School
Gainesville High School
Hylton High School
Osborn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Prerequisites

[Algebra 2](#)

Geometry

This course includes emphasis on two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of real-world applications and general problem-solving techniques, including Algebra skills, are used to implement these standards. Technology tools will be used. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1

Grades

9, 10, 11

Course Designation

Virtual Prince William (VPW)

Schools

Battlefield High School
Brentsville District High School
Colgan High School

Forest Park High School
Freedom High School
Gainesville High School
Gar-Field High School
Hylton High School
Independence Nontraditional High School
Osbourn Park High School
Patriot High School
Potomac High School
Unity Reed High School
Woodbridge High School

Prerequisites

[Algebra 1](#) or [Algebra 1, Parts 1 and 2](#)

Geometry, Parts 1 and 2

This course includes emphasis on two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of real-world applications and general problem-solving techniques, including Algebra skills, are used to implement these standards. Graphing utilities, computers, dynamic geometry software, and other appropriate technology tools will be used. Geometry, in two parts, is offered for students who need additional time to complete the Geometry curriculum. Geometry, Part 1 and Geometry, Part 2 are each year-long classes. Schools may double block the courses so that they meet every day for a full block of time over a full year or offer them over two years. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

Credits 1

Elective Credit for Part 1 and 1 Math Credit for Part 2 when student has passed both parts

Grades

11, 12

Schools

Woodbridge High School

Prerequisites

[Algebra 1](#) or [Algebra 1, Parts 1 and 2](#)

Notes

Students with disabilities eligible for credit accommodations may receive two math credits for completing both courses. If they have also taken Parts 1 and 2 of Algebra 1, they would receive three math credits and one elective credit for the four parts of the two courses.