

# Wyoming Department of Education Required Virtual Education Course Syllabus

## Park County School District # 1

Program Name	Park #1 Online	Content Area	Math
Course ID	OL5452	Grade Level	9th-12th
Course Name	FVS Algebra 2 (S1)	# of Credits	0.5
SCED Code	02056G0.5012	Curriculum Type	Math

### COURSE DESCRIPTION

*Semester-long course purchased through Florida Virtual and used for our district students. This course allows students to learn while having fun. Interactive examples help guide students' journey through customized feedback and praise. Mathematical concepts are applied to everyday occurrences such as earthquakes, stadium seating, and purchasing movie tickets. Students investigate the effects of an equation on its graph through the use of technology. Students have opportunities to work with their peers on specific lessons. Algebra II is an advanced course using hands-on activities, applications, group interactions, and the latest technology.*

### WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	<a href="#">BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets</a>
WY.MP	Mathematical Practices
	Make sense of problems and persevere in solving them, Reason abstractly and quantitatively, Construct viable arguments and critique the reasoning of others, Model with mathematics, Use appropriate tools strategically, Attend to precision, Look for and make use of structure, Look for and express regularity in repeated reasoning
WY.N	Number and Quantity
N-RN N-Q N-CN	The Real Number System, Quantities, The Complex Number System
WY.A	Algebra
A-SSE A-APR A-CED A-REI	Seeing Structure in Expressions, Arithmetic with Polynomials and Rational Functions, Creating Equations, Reasoning with Equations and Inequalities
WY.F	Functions
F-IF F-BF F-LE F-TF	Interpreting Functions, Building Functions, Linear and Exponential Models, Trigonometric Functions
WY.G	Geometry
G-SRT G-C	Similarity, Right Triangles, and Trigonometry, Circles
WY.S	Statistics and Probability
S-ID S-IC S-CP	Interpreting Categorical and Quantitative Data, Making Inferences and Justifying Conclusions, Conditional Probability and the Rules of Probability

### SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
01.02 Introduction to Functions	MP.5 F.IF.A.1	What are functions?
01.04 Graphing Linear Equations and Inequalities	MP.5 F.IF.B.5	How do you graph linear equations and inequalities?
01.05 Writing the Equation of a Line	MP.5 F.IF.C.7	How do you write the equation of a line?
01.06 Comparing Functions	MP.5 F.IF.C.7	How do you compare functions?
02.01 Rational Exponents	MP.5 N.RN.A.1	What are rational exponents?
02.02 Properties of Rational Exponents	MP.5 N.RN.A.1	What are the properties of rational exponents?
02.03 Solving Radical Equations	MP.5 A.REI.H.2	How do you solve radical equations?
02.05 Complex Numbers	MP.5 N.CN.D.1	What are complex numbers?
02.06 Operations of Complex Numbers	MP.5 N.CN.D.2	What are the operations of complex numbers?
02.07 Review of Polynomials	MP.5 A.APR.C.1	What are polynomials?
02.08 Polynomial Operations	MP.5 A.APR.C.1	What are the operations for polynomials?
03.01 Greatest Common Factors and Special Products	MP.5 A.SSE.A.2	What are greatest common factors and special products?

03.02 Factoring by Grouping	MP.5 A.SSE.B.3	How do you factor by grouping?
03.03 Sum and Difference of Cubes	MP.5 A.SSE.A.1	How do you find the sum and difference of cubes?
03.04 Graphing Quadratics	MP.5 F.IF.C.7	How do you graph quadratics?
03.06 Completing the Square	MP.5 G.GPE.K.1	How do you complete the square?
03.07 Solving Quadratic Equations	MP.5 N.REI.I.4	How do you solve quadratic equations?
03.08 Solving Quadratic Equations with Complex Solutions	MP.5 N.CN.F.7	How do you solve quadratic equations with complex solutions?
03.09 Investigating Quadratics	MP.5 F.IF.C.7	How do you investigate quadratics?
04.01 Polynomial Long Division	MP.5 A.APR.C.1	How do you do polynomial long division?
04.02 Polynomial Synthetic Division	MP.5 A.APR.C.1	How do you do polynomial synthetic division?
04.03 Theorems of Algebra	MP.5 A.REI.I.4	What are the theorems of algebra?
04.04 Rational Root Theorem and Descartes' Rule of Signs	MP.5 A.APR.D.2	What is the rational root theorem and Descartes' rule of signs?
04.05 Solving Polynomial Equations	MP.5 A.APR.C.2	How do you solve polynomial equations?
04.07 Graphing Polynomial Functions	MP.5 A.APR.C.2	How do you graph polynomial functions?
04.08 Polynomial Identities and Proofs	MP.5 A.APR.E.5	What are polynomial identities and proofs?
05.01 Simplifying Rational Expressions	MP.5 A.APR.F.6	How do you simplify rational expressions?
05.02 Multiplying and Dividing Rational Expressions	MP.5 A.APR.F.6	How do you multiply and divide rational expressions?
05.03 Adding and Subtracting Rational Expressions	MP.5 A.APR.F.6	How do you add and subtract rational expressions?
05.04 Simplifying Complex Fractions	MP.5 N.CN.D.1	How do you simplify complex fractions?
05.06 Discontinuities of Rational Expressions	MP.5 A.APR.F.6	What are discontinuities of rational expressions?
05.07 Asymptotes of Rational Functions	MP.5 F.IF.C.7	What are asymptotes of rational functions?
05.08 Solving Rational Equations	MP.5 N.RN.B.3	How do you solve rational equations?
05.09 Applications of Rational Equations	MP.5 A.APR.E.5	What are the applications of rational equations?