

Wyoming Department of Education Required Virtual Education Course Syllabus

Park County School District # 1

Program Name	Park #1 Online	Content Area	Math
Course ID	OL2435 A	Grade Level	8
Course Name	Algebra - MS 08 A	# of Credits	0.5
SCED Code	02038G0.5012	Curriculum Type	District Developed

COURSE DESCRIPTION

8th Math A covers the Wyoming State Standards for 8th grade that focus on the number system, expressions, equations, and functions which will prepare the students for Algebra 1 in high school. Each lesson includes one or more videos that demonstrate the concept being taught followed by a short quiz to measure the students mastery of the subject.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
CC.NS	The Number System
8.NS.A.1	Know that there are numbers that are not rational.
8.NS.A.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions
CC.EE	Expressions and Equations
8.EE.A.1	Know and apply the properties of integer exponents
8.EE.A.2	Use square root and cube root symbols
8.EE.A.3	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities
8.EE.B.4	Perform operations with numbers expressed in scientific notation
8.EE.B.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph.
8.EE.B.6	Use similar triangles to explain why the slope m is the same between any two distinct points
8.EE.B.7 (a & b)	Solve linear equations in one variable
8.EE.B.8 (a - c)	Analyze and solve pairs of simultaneous linear equations
CC.F	Functions: Define, evaluate, and compare functions.
8.F.A.1	Understand that a function is a rule that assigns to each input exactly one output.
8.F.A.2	Compare properties of two functions each represented in a different way

8.F.A.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line
8.F.B.4	Construct a function to model a linear relationship between two quantities.
8.F.B.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph

SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1		
Irrational Numbers	CC.8.NS.A.1	What are irrational numbers?
Approximate Irrational Numbers	CC.8.NS.A.2	Approximate irrational numbers.
Square & Cube Roots	CC.8.EE.A.2	Evaluate roots of perfect squares & cubes.
Unit 2		
One-Variable Equations	CC.8.EE.C.7	Solve one-variable equations.
One-Variable Equations Three Cases	CC.8.EE.C.7.a	Solve equations with one, no and infinite solutions.
Like Terms and Distributive Property	CC.8.EE.C.7.b	Add like terms and apply distributive property.
Solve Simultaneous Linear Equations	CC.8.EE.C.8	Solve systems of equations using elimination & substitution.
Solutions to Systems of Equations	CC.8.EE.C.8.a	Identify the point of intersection of two linear equations.
Solve Systems of Equations Algebraically	CC.8.EE.C.8.b	Solve systems with no solution & infinitely many solutions.
Solve Real World Problems	CC.8.EE.C.8.c	Solve story problems in two-variables.
Properties of Integer Exponents	CC.8.EE.A.1	Apply properties of integer exponents.
Scientific Notation	CC.8.EE.A.3	Use scientific notation to represent large & small values.
Operations with Scientific Notation	CC.8.EE.A.4	Add, sub, mult, divide with scientific notation.
Unit 3		
Proportional Relationships	CC.8.EE.B.5	Graph, interpret, & compare proportional relationships.
Similar Triangles	CC.8.EE.B.6	Use similar to show slopes are the same.
Functions	CC.8.F.A.1	What are functions?
Properties of Functions	CC.8.F.A.2	Compare properties of functions represented in different ways.
Function Types	CC.8.F.A.3	Give examples of linear & non-linear functions.
Construct Functions	CC.8.F.A.4	Construct a function to model a linear relationship.
Describe Functions	CC.8.F.A.5	Describe qualitatively the functional relationship of two quantities.