Wyoming Department of Education Required Virtual Education Course Syllabus

Niobrara County School District # 1

Program Name	Wyoming Virtual Academy	Content Area	MA
Course ID	D-MTH-011AV2-APL	Grade Level	9-12
Course Name	Math Foundations II - Semester 1	# of Credits	0.5
SCED Code	02002B0.5012	Curriculum Type	K12 Inc

COURSE DESCRIPTION

Generally offered first semester. This course brings students up to grade level—guiding them through sixth- to eighth-grade skills. It is appropriate for use as remediation at the high school level, a bridge to high school, or as middle school curriculum. The program builds computational skills and conceptual understanding needed to undertake high school-level math courses with confidence. Carefully paced, guided instruction is accompanied by interactive practice that is engaging and accessible. Formative assessments help students understand areas of weakness and improve performance, while summative assessments chart progress and skill development. The course effectively remediates computational skills and conceptual understanding needed to undertake high school-level math courses with confidence. This course is only offered to students in the Special Education Program or are currently being tested for the special education program.

WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets
7.ee.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations as strategies to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.
7.ns.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
7.ns.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
7.ns.3	Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.)
7.pr.1	Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.)
7.rp.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction (1/2)/(1/4) miles per hour, equivalently 2 miles per hour.
7.sp.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0

	indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
8.ee.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
8.ee.6	Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y =mx for a line through the origin and the equation y = mx + b for a line intercepting the vertical axis at b.
8.ns.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; the rational numbers are those with decimal expansions that terminate in 0's or eventually repeat. Know that other numbers are call irrational.

SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1: Numbers and Operations 1.01: Rounding, Estimating, and Range through 1.01 Practice Checkpoint		
1.01 Quiz		
1.02: Number Operations through 1.02 Practice Checkpoint 1.02 Quiz		
1.03: Number Sense: Squares and Square Root through 1.03 Practice Checkpoint 1.03 Quiz		
1.04: Problem Solving: The 5-Step Plan through 1.04 Practice Checkpoint 1.05: Problem Solving: Application through 1.05 Practice Checkpoint		
1.04 Quiz 1.05 Quiz		
1.06: Multiplication: Properties through 1.06 Practice Checkpoint 1.07:Multiplication: Decimals through 1.07 Practice Checkpoint		
1.06: Multiplication:Properties 1.06 Quiz 1.07:Multiplication: Decimals 1.07 Quiz		
1.08:Division through 1.08 Practice Checkpoint		
1.08:Division 1.08 Quiz		
1.09: Number Sense: Factors through 1.09 Practice Checkpoint		

1.09: Number Sense: Factors 1.09 Quiz		
1.10: Fractions: Equivalent Fractions through 1.10 Practice Checkpoint		
1.10: Fractions: Equivalent Fractions 1.10 Quiz		
1.11: Fractions: Estimating with Fractions through 1.11 Practice Checkpoint		
1.11: Fractions: Estimating with Fractions 1.11 Quiz		
1.12: Fractions: Multiplying and Dividing through 1.12 Practice Checkpoint		
1.12: Fractions: Multiplying and Dividing 1.12 Quiz 1.13 Unit 1 Assignment		
1.14 Unit 1 Test	8.ns.1	Students begin with a diagnostic to find out what they know. Then they learn about rounding numbers, order of operations, square numbers and square roots, five step thinking plan to solving word problems, multiplication properties, division, factoring, comparing fractions, addition/subtraction of fractions, and multiplication/division of fractions.
Unit 2: Data, Measurement, and Geometry 2.01: Organizing Data through 2.01 Practice Checkpoint 2.02: Graphing Data through 2.02 Practice Checkpoint		
2.01: Organizing Data 2.01 Quiz 2.02: Graphing Data 2.02 Quiz		
2.03: Metric Measures through 2.03 Practice Checkpoint 2.04: Customary Measures through 2.04 Practice Checkpoint		
2.03: Metric Measures 2.03 Quiz 2.04: Customary Measures 2.04 Quiz		
2.05: Other Measures through 2.05 Practice Checkpoint		
2.05: Other Measures 2.05 Quiz		

2.06: Plane Geometry through 2.06 Practice Checkpoint		
2.06: Plane Geometry 2.06 Quiz		
2.07: Polygons through 2.07 Practice Checkpoint		
2.07: Polygons 2.07 Quiz		
2.08: Space Figures through 2.08 Practice Checkpoint		
2.08: Space Figures 2.08 Quiz		
2.09: Geometric Measurements through 2.09 Practice Checkpoint		
2.09: Geometric Measurements 2.09 Quiz		
2.10: Circles through 2.10 Practice Checkpoint		
2.10: Circles 2.10 Quiz 2.11 Unit 2 Assignment		
2.12 Unit 2 Test	8.ee.6	Students begin with a diagnostic to find out what they know. Then they learn about types of graphs, solving equations, solving inequalities, metric measures, customary measures, time, temperature, planes, polygons, circles, space figures, and calculating perimeter, circumference, area, surface area, and volume.
Unit 3: Ratio, Proportion, and Decimals 3.01: Ratio and Proportion through 3.01 Practice Checkpoint		
3.01: Ratio and Proportion 3.01 Quiz		
3.02: Percent through 3.02 Practice Checkpoint		
3.02: Percent 3.02 Quiz		
3.03: Probability: Predicting Outcomes through 3.03 Practice Checkpoint		
3.03: Probability: Predicting Outcomes 3.03 Quiz		

3.04: Integers through 3.04 Practice Checkpoint		
3.04: Integers 3.04 Quiz		
3.05: Coordinate Graphing through 3.05 Practice Checkpoint		
3.05: Coordinate Graphing 3.05 Quiz		
3.06: Number Values through 3.06 Practice Checkpoint		
3.06: Number Values 3.06 Quiz		
3.07: Decimal Number Concepts through 3.07 Practice Checkpoint		
3.07: Decimal Number Concepts 3.07 Quiz 3.08 Unit 3 Assignment		
3.09 Unit 3 Test	7.pr.1, 7.rp.1	Students begin with a diagnostic to find out what they know. Then they learn how to solve proportion problems, find percents of whole numbers, predict outcomes, add and subtract integers, graph ordered pairs, and express numbers in expanded and scientific notation.
Unit 4: Numbers and Properties 4.01: Number Operations through 4.01 Practice Checkpoint		
4.01: Number Operations 4.01 Quiz		
4.02: Decimal Number Operations through 4.02 Practice Checkpoint 4.03: Problem Solving: Decimals through 4.03 Practice Checkpoint		
4.02: Decimal Number Operations 4.02 Quiz 4.03: Problem Solving: Decimals 4.03 Quiz		
4.04: Number Theory through 4.04 Practice Checkpoint 4.05: Problem Solving: Number Theory through 4.05 Practice Checkpoint		
4.04: Number Theory 4.04 Quiz 4.05: Problem Solving: Number Theory 4.05 Quiz		
4.06: Fraction Concepts through 4.06 Practice Checkpoint		

4.06: Fraction Concepts 4.06 Quiz		
4.07: Fraction Operations through 4.07 Practice Checkpoint 4.08: Problem Solving: Fractions through 4.08 Practice Checkpoint		
4.07: Fraction Operations 4.07 Quiz 4.08: Problem Solving: Fractions 4.08 Quiz		
4.09: Ratio and Proportion through 4.09 Practice Checkpoint 4.10: Problem Solving: Ratio and Proportion through 4.10 Practice Checkpoint		
4.09: Ratio and Proportion 4.10 Quiz 4.10: Problem Solving: Ratio and Proportion 4.10 Quiz		
4.11: Probability: Properties through 4.11 Practice Checkpoint		
4.11: Probability: Properties 4.11 Quiz		
4.12: Percent Concepts through 4.12 Practice Checkpoint 4.13: Problem Solving: Percents through 4.13 Practice Checkpoint		
4.12: Percent Concepts 4.12 Quiz 4.13: Problem Solving: Percents 4.13 Quiz 4.14 Unit 4 Assignment		
4.15 Unit 4 Test	7.ns.1, 7.ns.2, 7.ns.3	Students begin with a diagnostic to find out what they know. Then they review commutative, associate, zero, one, and distributive properties as well as learn about solving problems with decimals, writing fractions in simplest form, performing operations on fractions and mixed numbers, working problems involving percents of increase or decrease, as well as calculating discounts, markups, commissions, interest, and sales tax.
Unit 5:Concepts in Algebra 5.01: Algebra Concepts through 5.01 Practice Checkpoint		
5.01: Algebra Concepts 5.01 Quiz		
5.02: Variables and Equations through 5.02 Practice Checkpoint		
5.02: Variables and Equations 5.02 Quiz		

5.03: Equations and Inequalities through 5.03 Practice Checkpoint		
5.03: Equations and Inequalities 5.03 Quiz		
5.04: Expressions and Equations through 5.04 Practice Checkpoint		
5.04: Expressions and Equations 5.04 Quiz		
5.05: Problem Solving: Equations through 5.05 Practice Checkpoint 5.06: Problem Solving: Measurement through 5.06 Practice Checkpoint		
5.05: Problem Solving: Equations 5.05 Quiz 5.06: Problem Solving: Measurement 5.06 Quiz 5.07 Unit 5 Assignment		
5.08 Unit 5 Test	7.ee.3, 8.ee5	Students begin with a diagnostic to find out what they know. Then they learn about evaluating expressions, solving multi-step equations and solving problems involving measurement.
Unit 6: Geometry and Statistics 6.01: Geometric Concepts through 6.01 Practice Checkpoint		
6.01: Geometric Concepts 6.01 Quiz		
6.02: Plane Figures through 6.02 Practice Checkpoint 6.03: Motion Geometry through 6.03 Practice Checkpoint		
6.02: Plane Figures 6.02 Quiz 6.03: Motion Geometry 6.03 Quiz		
6.04: Space Figures: A Review through 6.04 Practice Checkpoint 6.05: Geometric Measurement: A Review through 6.05 Practice Checkpoint		
6.04: Space Figures: A Review 6.04 Quiz 6.05: Geometric Measurement: A Review 6.05 Quiz		
6.06: Statistics through 6.06 Practice Checkpoint		
6.06: Statistics 6.06 Quiz		
6.07: Graphs and Plots through 6.07 Practice Checkpoint		

6.07: Graphs and Plots 6.07 Quiz 6.08 Unit 6 Assignment		
6.09 Unit 6 Test	7.sp.5	Students begin with a diagnostic to find out what they know. Then they learn basic geometric concepts, as well as how to identify plane figures, calculate circumference and area of a circle, determine similarity or congruency, measure length, area, volume, and surface area of geometric figures, find mean, median, mode, and rage in a set of data, and organize data on various graphs and plots.