

# 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-011BV2-APL	Grade Level	9-12
Course Name	Math Foundations II - Semester 2	# of Credits	0.5
SCED Code	02002B0.5022	Curriculum Type	K12 Inc

### COURSE DESCRIPTION

*Generally offered second 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#	<a href="#">BENCHMARK (Standard/Indicator) Use the Standards and Benchmarks as Spreadsheets</a>
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.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.rp.2	Recognize and represent proportional relationships between quantities.
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.
7.ee.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
7.g.1	Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
7.ee.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”
7.ee.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
7.g.4	Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
7.g.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

8.g.9	Know the formulas for the volume of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	
SCOPE AND SEQUENCE		
UNIT OUTLINE	STANDARD#	OUTCOMES OBJECTIVES/STUDENT CENTERED GOALS
Unit 1: Operations and Real Numbers 1.01: Integers through 1.01 Quiz		
1.02: Adding and Subtracting Integers through 1.02 Practice Checkpoint 1.03: Multiplying and Dividing Integers through 1.03 Practice Checkpoint		
1.02 Quiz 1.03 Quiz		
1.04: Coordinate Graphing through 1.04 Practice Checkpoint		
1.04 Quiz		
1.05: Number Concepts Review through 1.05 Practice Checkpoint		
1.05 Quiz		
1.06: Properties through 1.06 Practice Checkpoint		
1.06 Quiz		
1.07: Problem Solving: The 5-Step Plan through 1.07 Practice Checkpoint		
1.07 Quiz		
1.08: Operations with Rational Numbers through 1.08 Practice Checkpoint		
1.08 Quiz		
1.09: Basic Operations with Fractions through 1.09 Practice Checkpoint		
1.09 Quiz 1.10 Unit 1 Assignment		
1.11 Unit 1 Test	7.ns.1	Students begin with a diagnostic to find out what they know. Then they learn about absolute value and how to add, subtract, multiply, and divide integers. They also learn about graphing ordered pairs, review

		addition and multiplication properties, and more.
Unit 2: Ratio, Proportion, and Probability 2.01: Ratio and Proportion through 2.01 Practice Checkpoint 2.02: Problem Solving: Ratio and Proportion through 2.02 Practice Checkpoint		
2.01 Quiz 2.02 Quiz		
2.03: Percent Concepts through 2.03 Practice Checkpoint 2.04: Percent: Practical Uses through 2.04 Practice Checkpoint		
2.03 Quiz 2.04 Quiz		
2.05: Probability through 2.05 Practice Checkpoint		
2.05 Quiz 2.06 Unit 2 Assignment		
2.07 Unit 2 Test	7.rp.1, 7.rp.2, 7.sp.5	Students begin with a diagnostic to find out what they know. Then they review and solve problems involving percent and probability.
Unit 3: Concepts in Algebra 3.01: Expressions, Equations, Operations through 3.01 Practice Checkpoint		
3.01 Quiz		
3.02: Algebra: Simplifying through 3.02 Practice Checkpoint		
3.02 Quiz		
3.03: Algebra: Equalities and Inequalities through 3.03 Practice Checkpoint		
3.03 Quiz		
3.04: Multistep Equalities, Inequalities through 3.04 Practice Checkpoint 3.05: Algebra: From Data to Equations through 3.05 Practice Checkpoint		
3.04 Quiz 3.05 Quiz 3.06 Unit 3 Assignment		
3.07 Unit 3 Test	7.ee.1	Students begin with a diagnostic to find out what they know. Then they review simplifying expression and solving multi-step equations and inequalities. Students also learn how

		to translate data into equations and inequalities.
Unit 4: Geometric Concepts 4.01: Points, Lines, Rays, Angles through 4.01 Practice Checkpoint		
4.01 Quiz		
4.02: Plane Figures through 4.02 Practice Checkpoint 4.03: Space Figures through 4.03 Practice Checkpoint		
4.02 Quiz 4.03 Quiz		
4.04: Geometric Measurement through 4.04 Practice Checkpoint		
4.04 Quiz		
4.05: Square Roots and Triangles through 4.05 Practice Checkpoint		
4.05 Quiz		
4.06: Coordinate Graphing 1 through 4.06 Practice Checkpoint		
4.06 Quiz		
4.07: Coordinate Graphing 2 through 4.07 Practice Checkpoint		
4.07 Quiz 4.08 Unit 4 Assignment		
4.09 Unit 4 Test	7.g.1	Students begin with a diagnostic to find out what they know. Then they review points, lines, rays, angles, and segments. They also review plane and space figures and learn formulas for the area of plane figures and volume of space figures. Students further explore graphing and more.
Unit 5: Expressions and Equations 5.01: Number Notation through 5.01 Practice Checkpoint 5.02: Expressions and Equations through 5.02 Practice Checkpoint		
5.01 Quiz 5.02 Quiz		

5.03: Properties Review through 5.03 Practice Checkpoint		
5.03 Quiz		
5.04: Simplifying Expressions through 5.04 Practice Checkpoint		
5.04 Quiz		
5.05: Solving Equations using Properties through 5.05 Practice Checkpoint 5.06: Equations with Multiplication through 5.06 Practice Checkpoint		
5.05 Quiz 5.06 Quiz 5.07 Unit 5 Assignment		
5.08 Unit 5 Test	7.ee.1, 7.ee.2, 8.ee.4	Students begin with a diagnostic to find out what they know. Then they review properties of multiplication, evaluate and simplify expressions, use inverse operations to solve equations, and more.
Unit 6: Elements of Algebra 6.01: Integers through 6.01 Practice Checkpoint		
6.01 Quiz		
6.02: Equations with Integers by Add/Sub through 6.02 Practice Checkpoint		
6.02 Quiz		
6.03: Equations with Integers by Mult/Div through 6.03 Practice Checkpoint		
6.03 Quiz		
6.04: Inequalities through 6.04 Practice Checkpoint 6.05: Solve Inequalities with Inverse Ops through 6.05 Practice Checkpoint		
6.04 Quiz 6.05 Quiz		
6.06: Solving Inequalities with Mult/Div through 6.06 Practice Checkpoint		
6.06 Quiz		

6.07: Factors and Exponents through 6.07 Practice Checkpoint		
6.07 Quiz		
6.08: Rational Numbers through 6.08 Practice Checkpoint		
6.08 Quiz		
6.09: Equations-Inequalities: by Add/Sub through 6.09 Practice Checkpoint 6.10: Equations-Inequalities: by Mult/Div through 6.10 Practice Checkpoint		
6.09 Quiz 6.10 Quiz		
6.11: Graphing on the Coordinate Plane through 6.11 Practice Checkpoint		
6.11 Quiz		
6.12: Ratio and Proportion through 6.12 Practice Checkpoint 6.13: Percent through 6.13 Practice Checkpoint		
6.12 Quiz 6.13 Quiz		
6.14: Problem Solving with Percent through 6.14 Practice Checkpoint		
6.14 Quiz		
6.15: Probability: Permutations through 6.15 Practice Checkpoint		
6.15 Quiz 6.16 Unit 6 Assignment		
6.17 Unit 6 Test	7.ee.1, 7.ee.2, 8.ee.4	Students begin with a diagnostic to find out what they know. Then they use number lines to identify, locate, and compare integers, as well as determine absolute value. Students learn rules for solving equations by adding/subtracting/multiplying/dividing integers with the same or different sign. They also solve inequalities, graph linear equations, write ratios and proportions, and more.
Unit 7: Geometry 7.01: Algebra with Geometry through 7.01 Practice Checkpoint		

7.01 Quiz		
7.02: Polygons and Circles through 7.02 Practice Checkpoint		
7.02 Quiz		
7.03: Area and Volumethrough 7.03 Practice Checkpoint		
7.03 Quiz		
7.04: Special Triangles through 7.04 Practice Checkpoint		
7.04 Quiz		
7.05: Statistics and Graphing through 7.05 Practice Checkpoint		
7.05 Quiz 7.06 Unit 7 Assignment		
7.07 Unit 7 Test	7.g.1, 7.g.4, 7.g.6, 8.g.9	Students begin with a diagnostic to find out what they know. Then they review the definitions of point, line, ray, line segment, and angle. Students find area of polygons and surface area of pyramids, prisms, and cones. They also learn about the Pythagorean theorem and how to use frequency tables, bar, line, and circle graphs, scatter plots, and stem and leaf plots.