

| Options FRMS Math 8A-OR | Scope and Sequence |
|---------------------------------------|---|
| Unit Lesson | Objectives |
| Exponents | |
| Powers and Exponents | |
| | Express a power of a positive integer base in expanded form. |
| | Express expanded form in exponential form. |
| | Evaluate powers using fractional and negative bases. |
| Zero and Negative Exponents | |
| | Determine patterns of exponent values from a table. |
| | Evaluate powers of zero and negative exponents. |
| | Simplify expressions of zero and negative exponents. |
| Powers with the Same Base | |
| | Evaluate powers of the same base through multiplication and division. |
| | Simplify expressions of powers with the same base. |
| Raising a Power to a Power | |
| | Simplify and evaluate expressions of raising a power to a power of integer exponents. |
| Evaluating Expressions with Exponents | |
| | Simplify expressions using the rules of exponents. |
| | Evaluate expressions using substitution of the variables. |
| Introduction to Scientific Notation | |
| | Convert very small or very large numbers between scientific notation and standard notation. |
| | Order and estimate products and quotients of numbers written in scientific notation. |
| Operations with Scientific Notation | |
| | Evaluate products and quotients of scientific notation values. |

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| Unit Lesson | Objectives |
| | Recognize scientific notation answers generated by technology and identify the symbols associated with the value. |
| | Identify proper units of measurement for quantities written in scientific notation. |
| Exploring Real Numbers | |
| | Classify numbers as rational or irrational numbers, and decimals as terminating or repeating. |
| | Express a repeating decimal with bar notation, and convert it to a fraction. |
| | Determine sums and products of rational and irrational numbers. |
| Unit Test | |
| Linear Functions | |
| Introduction to Functions | |
| | Identify functions from tables, graphs, and equations. |
| | Determine if a real-world situation describes a functional relationship. |
| Linear vs. Nonlinear Functions | |
| | Interpret the rate of change from a graph or table. |
| | Differentiate functions as either linear or nonlinear. |
| Using Function Notation | |
| | Identify the domain and range of a function. |
| | Use function notation to describe and evaluate a function. |
| Constructing Linear Functions | |
| | Analyze linear functions to find the rate of change and initial value. |
| | Interpret the rate of change and initial value of a linear function in terms of the situation it models. |
| Rate of Change and Introduction to Slope | |
| | Determine the positive slope of a line from a table and a graph. |

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| Unit Lesson | Objectives |
| | Compare positive slopes in a real-world situation. |
| Exploring Slope | |
| | Recognize the difference between positive slope, negative slope, no slope, and zero slope. |
| | Determine the value of the slope of a line from a table or a graph. |
| Proportional Relationships | |
| | Determine whether a linear function is a direct variation. |
| | Solve problems involving direct variation. |
| | Compare proportional and nonproportional linear functions in the form of a table, graph, and equation. |
| Slope-Intercept Form | |
| | Analyze a graph to determine slope and y-intercept. |
| | Graph a linear function using the slope and y-intercept. |
| | Write a linear equation in slope-intercept form given the slope and y-intercept. |
| Standard Form | |
| | Analyze a linear graph to determine the intercepts. |
| | Write linear equations in standard form to model real-world scenarios. |
| | Use standard form to identify and graph components of a linear function. |
| Graphing in a Variety of Contexts | |
| | Construct and analyze graphs given two components of a linear function. |
| | Estimate y-intercepts on a graph. |
| Unit Test | |
| Linear Equations | |
| Simplifying Algebraic Expressions | |

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| Unit | Lesson | Objectives |
| | | Identify and combine like terms in algebraic expressions. |
| | | Simplify algebraic expressions. |
| | | Write and identify equivalent expressions. |
| | Using the Distributive Property | |
| | | Use the distributive property to simplify expressions. |
| | | Identify and justify distributed expressions. |
| | Combining Like Terms to Solve Equations | |
| | | Identify and combine like terms to solve one-variable linear equations. |
| | | Determine and apply properties of equality when solving an equation. |
| | Solving with the Distributive Property | |
| | | Solve one-variable linear equations using the distributive property. |
| | | Justify the steps taken to solve one-variable linear equations involving the distributive property. |
| | Writing Equations | |
| | | Write equations from words. |
| | | Write equations to represent real-world situations. |
| | Writing Linear Functions | |
| | | Write a linear equation in slope-intercept form given the slope and a point other than the y-intercept. |
| | | Compare and contrast using point-slope form and the slope-intercept form to get an equation to slope-intercept form. |
| | Writing Linear Equations Given Two Points | |
| | | Write a linear equation in slope-intercept form given two points. |
| | Applying Linear Functions | |
| | | Determine what the slope and y-intercept are and what they represent in real-world functional relationships. |

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| Unit | Lesson | Objectives |
| | | Use real-world scenarios of linear functions to write an equation in slope-intercept form. |
| | | Evaluate inputs and outputs for linear equations in slope-intercept form. |
| | Comparing Slopes and Intercepts | |
| | | Determine slope and y-intercept of linear functions represented differently. |
| | | Compare the slope and intercepts of linear functions, including when they are expressed as equations written in different forms. |
| | Comparing Functions in the Real World | |
| | | Analyze real-world linear relationships in order to make comparisons. |
| | Performance Task: A Child's Growth and Prosperity | |
| | Unit Test | |
| Linea | ar Solutions | |
| | Exploring Systems of Linear Equations | |
| | | Determine if a given coordinate point is a solution to a system of linear equations. |
| | | Identify the unique solution of a system of two linear equations from a graph. |
| | Using Graphs to Determine the Number of Solutions | |
| | | Determine the number of solutions of a system of linear equations from a graph or by inspection. |
| | | Create a system of linear equations that has no solution, one solution, or infinitely many solutions. |
| | Using Graphs to Solve Systems | |
| | | Rewrite a system of linear equations in slope-intercept form. |
| | | Graph linear systems on the coordinate plane. |
| | | Determine the solution of a linear system from the graph. |
| | Estimating Solutions of Systems | |

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| | | Estimate solutions of linear systems graphically. |
| | | Use intercepts to graph a system of equations given in standard form. |
| | Writing and Solving Systems | |
| | | Create systems of equations from mathematical problems. |
| | | Solve systems of two linear equations. |
| | Exploring Systems in the Real World | |
| | | Write the algebraic model that represents a real-world scenario. |
| | | Solve a system of two linear equations represented by a real-world scenario. |
| | | Interpret solutions in the original context. |
| | Using Technology to Solve Systems | |
| | | Use a graphing utility to explore and solve systems of two linear equations. |
| | Using Substitution to Solve Systems | |
| | | Use substitution to solve a linear system. |
| | Rewriting Equations to Use Substitution | |
| | | Isolate one variable in a system of linear equations. |
| | | Use substitution to solve a system of linear equations. |
| | | Write and solve a system of linear equations from a real-world scenario. |
| | Unit Test | |
| Cumulative Exam | | |
| | Cumulative Exam Review | |

Cumulative Exam