Standards: Idaho Content Standards, p. 119 -164

Algebra 1: Alignment Table

Semester	A Unit 1	A Unit 2	A Unit 3	A Unit 4	A Unit 5	A Unit 6	A Unit 7	A Unit 8	B Unit 1	B Unit 2	B Unit 3	B Unit 4	B Unit 5	B Unit 6	B Unit 7	B Unit 8
A.SSE.A.1.a													x			
A.SSE.B.3.a													x	x	x	
A.SSE.B.3.c															x	

A.APR.A.1.a													x			
A.APR.B.3																x
A.APR.C.4														x		
A.CED.A.1	x	x							x	x					x	
A.CED.A.3		x				x			x							
A.REI.A.1	x	x							x							
A.REI.A.2	x															
A.REI.B.3	x					x			x							
A.REI.B.4.a															x	x
A.REI.B.4.b															x	
A.REI.C.5						x			x							
A.REI.C.6						x			x							
A.REI.C.7																x
A.REI.D.10				x												
A.REI.D.12						x			x							
F.IF.A.1			x							x						x
F.IF.A.2			x							x	x					
F.IF.B.4				x												x
F.IF.B.5										x						
F.IF.B.6				x	x											
F.IF.C.7.a				x	x											x

F.IF.C.7.b					x						x					
F.IF.C.8.a							x			x	x					x
F.IF.C.8.b							x			x						
F.BF.A.1.b										x						
F.BF.A.2			x				x									
F.BF.B.4.a			x							x						
F.BF.B.4.c			x							x						
F.LE.A.1.a										x						x
F.LE.A.1.b										x						
F.LE.A.1.c										x						
F.LE.A.2			x				x			x						
F.LE.A.3							x									
F.LE.B.5							x			x						
S.ID.A.2												x				
S.ID.A.3												x				
S.ID.A.4												x				
S.ID.B.6												x				
S.ID.B.7.a												x				
S.ID.B.7.b												x				
S.ID.C.8				x								x				
S.ID.C.9												x				

S.ID.C.10												**x**				
S.CP.A.4												**x**				
N.RN.A.1								**x**			**x**					
N.RN.A.2								**x**			**x**					

Algebra 1 A: Course Map
Unit 1: Pre-Algebra Review

Idaho Standards	Unit Objectives
A.CED.A.1: Create one-variable equations and inequalities to solve problems, including linear, quadratic, rational, and exponential functions. A.REI.A.1: Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method. A.REI.A.2: Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. A.REI.B.3: Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	● solve equations in one variable. ● explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. ● create equations in one variable and use them to solve problems.
Lesson 1: Solving One and Two Step Equations	
Lesson Objectives 1. solve one and two step equations. ○ correlation: A.CED.A.1 2. write one and two step equations. ○ correlation: A.CED.A.1	Assessments ● Objective 1: U1A1: Solving One & Two Step Equations Practice ● Objective 2: U1A1: Solving One & Two Step Equations Practice

Lesson 2: Solving Multi-Step Equations	
Lesson Objectives 1. solve multi-step equations. ○ correlation: A.CED.A.1 2. write multi-step equations. ○ correlation: A.REI.A.2	Assessments ● Objective 1: U1A2: Solving Multi-Step Equations Practice ● Objective 2: U1A2: Solving Multi-Step Equations Practice
Lesson 3: Solving Equations with Variables on Both Sides	
Lesson Objectives 1. solve equations with variables on both sides. ○ correlation: A.REI.A.2 2. write equations with variables on both sides. ○ correlation: A.REI.A.2	Assessments ● Objective 1: U1A3: Solving equations with Variables on Both Sides Practice ● Objective 2: U1A3: Solving equations with Variables on Both Sides Practice
Lesson 4: Solving Equations	
Lesson Objectives 1. justify each step in solving a linear equation. ○ correlation: A.REI.A.1 2. write equations to model and solve mathematical and real-world problems. ○ correlation: A.REI.B.3	Assessments ● Objective 1: U1A4: Solving Equations Practice ● Objective 2: U1A4: Solving Equations Practice

Unit 2: Solving Equations and Inequalities

Idaho Standards	Unit Objectives
A.CED.A.1: Create one-variable equations and inequalities to solve problems, including linear, quadratic, rational, and exponential functions. A.CED.A.3: Represent constraints using equations or inequalities and interpret solutions as viable or non-viable options in a modeling context.	● solve compound inequalities and understand how to graph the solutions. ● describe the constraints of an equation or inequality in terms of its variable and use it to determine a viable solution.

A.REI.B.3: Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	• solve linear inequalities and graph them.
Lesson 1: Solving Formulas and Literal Equations	
Lesson Objectives 1. solve an equation for a given variable. ○ correlation: A.CED.A.1 2. describe the restrictions on a variable. ○ correlation: A.CED.A.3 3. use formulas to solve real-world problems. ○ correlation: A.CED.A.1	Assessments • Objective 1: U2A1: Solving Formulas and Literal Equations Practice • Objective 2: U2A1: Solving Formulas and Literal Equations Practice • Objective 3: U2A1: Solving Formulas and Literal Equations Practice
Lesson 2: Solving Inequalities	
Lesson Objectives 1. solve linear inequalities. ○ correlation: A.REI.B.3 2. graph the solutions of linear inequalities. ○ correlation: A.REI.B.3	Assessments • Objective 1: U2A2: Solving Inequalities Practice • Objective 2: U2A2: Solving Inequalities Practice
Lesson 3: Solving Compound Inequalities	
Lesson Objectives 1. solve a compound inequality. ○ correlation: A.CED.A.1 2. graph the solution of a compound inequality. ○ correlation: A.CED.A.1	Assessments • Objective 1: U2A3: Solving Compound Inequalities Practice • Objective 2: U2A3: Solving Compound Inequalities Practice

Unit 3: Functions

Idaho Standards	Unit Objectives
F.IF.A.1: Demonstrate understanding that a function is a correspondence from one set (called the domain) to another set	• understand what makes a relation a function and its

(called the range) that assigns to each element of the domain exactly one element of the range: If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$. F.IF.A.2: Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. Analyze functions using different representations. F.BF.A.2: Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. F.BF.B.4.a: Find inverse functions. Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. F.BF.B.4.c: Find inverse functions. Read values of an inverse function from a graph or a table, given that the function has an inverse. F.LE.A.2: Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input/output pairs (include reading these from a table).	subsets. ● evaluate functions in multiple ways. ● write a function that describes a relationship between two quantities. ● find inverse functions using function notation. ● construct arithmetic sequences.
Lesson 1: Functions and Relations	
Lesson Objectives 1. find the domain and range of a relation. ○ correlation: F.IF.A.1 2. determine if a relation is a function. ○ correlation: F.IF.A.1 3. find the inverse of a function. ○ correlation: F.IF.A.2	Assessments ● Objective 1: U3A1: Functions and Relations Practice, U3D1: Name that Sequence ● Objective 2: U3A1: Functions and Relations Practice, U3D1: Name that Sequence ● Objective 3: U3A1: Functions and Relations Practice, U3D1: Name that Sequence
Lesson 2: Evaluating Functions	
Lesson Objectives 1. evaluate functions.	Assessments ● Objective 1: U3A2: Evaluating Functions

○ correlation: F.IF.A.2 2. combine functions using arithmetic operations. ○ correlation: F.BF.A.2 3. find the inverse of a function using function notation. ○ correlation: F.BF.B.4.a, F.BF.B.4.c	● Objective 2: U3A2: Evaluating Functions ● Objective 3: U3A2: Evaluating Functions
Lesson 3: Arithmetic Sequences	
Lesson Objectives 1. explain what an arithmetic sequence looks like. ○ correlation: F.LE.A.2 2. find the rule of an arithmetic sequence. ○ correlation: F.LE.A.2 3. find the nth term of an arithmetic sequence. ○ correlation: F.LE.A.2	Assessments ● Objective 1: U3A3: Arithmetic Sequences ● Objective 2: U3A3: Arithmetic Sequences ● Objective 3: U3A3: Arithmetic Sequences

Unit 4: Graphing Equations

Idaho Standards	Unit Objectives
S-ID.C.8: Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. F.IF.B.6: Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. F.IF.B.4: For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maxima and minima; symmetries; end behavior; and periodicity. F.IF.C.7.a: Graph functions expressed symbolically and show key features of the graphs, by hand in simple cases and using technology for more complicated cases. a. Graph linear and quadratic functions and show intercepts, maxima, and minima.	● interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.

Lesson 1: Rate of Change	
Lesson Objectives 1. calculate a rate of change. ○ correlation: S-ID.C.8, F.IF.B.6	Assessments ● Objective 1: U4A1: Rate of Change Practice
Lesson 2: Slope	
Lesson Objectives 1. find the slope of a line. ○ correlation: S-ID.C.8, F.IF.B.4	Assessments ● Objective 1: U4A2: Slope Practice
Lesson 3: Graphing Equations in Slope-Intercept Form	
Lesson Objectives 1. graph an equation in slope-intercept form. ○ correlation: S-ID.C.8, F.IF.C.7.a	Assessments ● Objective 1: U4A3: Graphing Equations in Slope-Intercept Form Practice
Lesson 4: Writing Equations in Slope-Intercept Form	
Lesson Objectives 1. write the equation of a line in slope-intercept form. ○ correlation: S-ID.C.8 2. understand the slope and *y*-intercept in the context of a problem. ○ correlation: S-ID.C.8, F.IF.B.6	Assessments ● Objective 1: U4A4: Writing Equations in Slope-Intercept From Practice ● Objective 2: U4A4: Writing Equations in Slope-Intercept From Practice

Unit 5: Different Equation Forms

Idaho Standards	Unit Objectives
F.IF.B.6: Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph. F.IF.C.7: Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using	● calculate and interpret the rate of change of a function. ● understand linear equations using multiple forms of representation.

technology for more complicated cases. F.IF.C.7.a: Graph linear and quadratic functions and show intercepts, maxima, and minima. A.REI.D.10: Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).	
Lesson 1: Comparing Rates of Change	
Lesson Objectives 1. compare rates of change. ○ correlation: F.IF.B.6	Assessments ● Objective 1: U5A1: Comparing Rates of Change Practice, U5D1: Rate of Change Examples in Real Life
Lesson 2: Slope-Intercept Form	
Lesson Objectives 1. graph linear equations in slope-intercept form. ○ correlation: A.REI.D.10 2. write linear equations in slope-intercept form. ○ correlation: A.REI.D.10 3. write the equation of a line parallel or perpendicular to a given line through a given point. ○ correlation: A.REI.D.10	Assessments ● Objective 1: U5A2: Slope-Intercept From Practice ● Objective 2: U5A2: Slope-Intercept From Practice ● Objective 3: U5A2: Slope-Intercept From Practice
Lesson 3: Standard Form	
Lesson Objectives 1. identify the intercepts of a linear equation in standard form. ○ correlation: F.IF.B.6 2. graph a linear equation by finding the intercepts from standard form. ○ correlation: F.IF.C.7, F.IF.C.7.a 3. write linear equations in standard form. ○ correlation: F.IF.C.7, F.IF.C.7.a	Assessments ● Objective 1: U5A3: Standards From Practice ● Objective 2: U5A3: Standards From Practice ● Objective 3: U5A3: Standards From Practice

Unit 6: Systems of Equations

Idaho Standards	Unit Objectives
A.REI.B.3: Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters. A.REI.C.5: Verify that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions. A.REI.C.6: Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. A.REI.D.12: Graph the solutions to a linear inequality in two variables as a half- plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes. A-CED.A.3: Represent constraints using equations or inequalities and interpret solutions as viable or non-viable options in a modeling context.	● solve systems of linear equations using multiple methods.
Lesson 1: Using Graphs and Tables to Solve Systems of Equations	
Lesson Objectives 1. solve a system of linear equations by graphing. ○ correlation: A-REI.C.6 2. solve a system of linear equations using a table. ○ correlation: A-REI.C.6	Assessments ● Objective 1: U6A1: Using Graphs and Tables to Solve Systems of Equations Practice ● Objective 2: U6A1: Using Graphs and Tables to Solve Systems of Equations Practice
Lesson 2: Using Substitution to Solve Systems of Equations	

Lesson Objectives 1. solve a system of equations using substitution. ○ correlation: A-REI.C.5	Assessments ● Objective 1: U6A2: Using Substitution to Solve System of Equations Practice
Lesson 3: Using Elimination to Solve Systems of Equations	
Lesson Objectives 1. solve a system of equations using elimination with addition or subtraction. ○ correlation: A-REI.C.5 2. solve a system of equations using elimination with multiplication. ○ correlation: A-REI.C.5	Assessments ● Objective 1: U6A3: Using Elimination to Solve System of Equations Practice ● Objective 2: U6A3: Using Elimination to Solve System of Equations Practice
Lesson 4: Applications of Systems of Equations	
Lesson Objectives 1. choose the best method for solving a system of equations. ○ correlation: A-REI.C.5 2. solve real-world problems involving systems of equations. ○ correlation: A-REI.C.5	Assessments ● Objective 1: U6A4: Applications of System sof Equations Practice ● Objective 2: U6A4: Applications of System sof Equations Practice
Lesson 5: Linear Inequalities and Systems of Linear Inequalities	
Lesson Objectives 1. graph a linear inequality. ○ correlation: A.REI.B.3 2. solve a system of linear inequalities by graphing. ○ correlation: A-CED.A.3, A.REI.D.12	Assessments ● Objective 1: U6A6: Linear Inequalities and Systems of Linear Inequalities ● Objective 2: U6A6: Linear Inequalities and Systems of Linear Inequalities

Unit 7: Exponents

Idaho Standards	Unit Objectives

F.IF.C.8: Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. F.IF.C.8.b: Use the properties of exponents to interpret expressions for exponential functions. Apply to financial situations such as identifying appreciation and depreciation rate for the value of a house or car sometime after its initial purchase. F.BF.A.2: Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms. F.LE.A.1: Distinguish between situations that can be modeled with linear functions and with exponential functions. F.LE.A.1.a: Demonstrate that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals. F.LE.A.1.b: Identify situations in which one quantity changes at a constant rate per unit interval relative to another. F.LE.A.1.c: Identify situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another. F.LE.A.2: Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input/output pairs (include reading these from a table). F.LE.A.3: Use graphs and tables to demonstrate that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function. F.LE.B.5: Interpret the parameters in a linear or exponential function (of the form $f(x) = b\text{^}x + k$) in terms of a context.	● use the properties of exponents to interpret expressions for exponential functions. ● write geometric sequences, their rule and nth term. ● interpret the parameters in a linear or exponential function in terms of a context.
Lesson 1: Properties of Exponents	
Lesson Objectives 1. use the properties of exponents to simplify expressions. ○ correlation: F.IF.C.8, F.IF.C.8.b 2. solve exponential equations.	Assessments ● Objective 1: U7A1: Properties of Exponents Practice, U7D1: Properties of Exponents Explained ● Objective 2: U7A1: Properties of Exponents Practice,

○ correlation: F.IF.C.8, F.IF.C.8.b	U7D1: Properties of Exponents Explained
Lesson 2: Geometric Sequences	
Lesson Objectives 1. recognize geometric sequences. ○ correlation: F.IF.C.8 2. write a rule for a geometric sequence. ○ correlation: F.BF.A.2, F.LE.A.1, F.LE.A.1.a, F.LE.A.1.b 3. find the *n*th term in a geometric sequence. ○ correlation: F.LE.A.1, F.LE.A.1.a, F.LE.A.1.b	Assessments ● Objective 1: U7A2: Geometric Sequences Practice ● Objective 2: U7A2: Geometric Sequences Practice ● Objective 3: U7A2: Geometric Sequences Practice
Lesson 3: Graphing Exponential Functions	
Lesson Objectives 1. graph an exponential function. ○ correlation: F.LE.A.3 2. identify the key features of an exponential function. ○ correlation: F.LE.B.5	Assessments ● Objective 1: U7A3: Graphing Exponential Functions Practice ● Objective 2: U7A3: Graphing Exponential Functions Practice
Lesson 4: Applications of Exponential Functions	
Lesson Objectives 1. write exponential growth and decay functions. ○ correlation: F.LE.B.5, F.LE.A.1.c 2. solve problems involving exponential growth and decay. ○ correlation: F.LE.B.5, F.LE.A.1.c	Assessments ● Objective 1: U7A4: Applications of Exponential Functions ● Objective 2: U7A4: Applications of Exponential Functions

Unit 8: Radicals

Idaho Standards	Unit Objectives
N.RN.A.1: Explain how the definition of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.	● describe and manipulate radical expressions. ● rewrite expressions involving radicals and rational

N.RN.A.2: Rewrite expressions involving radicals and rational exponents using the properties of exponents.	exponents using the properties of exponents.
Lesson 1: Simplifying Radicals	
Lesson Objectives 1. simplify radical expressions. ○ correlation: N.RN.A.1 2. multiply and divide radical expressions. ○ correlation: N.RN.A.1	Assessments ● Objective 1: U8A1: Simplifying Radicals Practice, U8D1: You're the Teacher ● Objective 2: U8A1: Simplifying Radicals Practice, U8D1: You're the Teacher
Lesson 2: Operations with Radicals	
Lesson Objectives 1. describe what radicals look like. ○ correlation: N.RN.A.1 2. combine radicals. ○ correlation: N.RN.A.2	Assessments ● Objective 1: U8A2: Operations with Radicals Practice ● Objective 2: U8A2: Operations with Radicals Practice
Lesson 3: Rational Exponents	
Lesson Objectives 1. define how the properties of exponents help simplify expressions with rational exponents. ○ correlation: N.RN.A.2 2. use rational exponents to simplify radical expressions. ○ correlation: N.RN.A.2	Assessments ● Objective 1: U8A3: Rational Exponents Practice, U8A4: Pendulum Problems ● Objective 2: U8A3: Rational Exponents Practice, U8A4: Pendulum Problems

Algebra 1 B: Course Map
Unit 1: Equations and Inequalities Review

Idaho Standards	Unit Objectives
A.CED.A.1: Create one-variable equations and inequalities to solve problems, including linear, quadratic, rational, and exponential functions. A-CED.A.3: Represent constraints using equations or	● solve linear equations and inequalities, including real-world applications. ● solve a system of two linear equations using the best

inequalities and interpret solutions as viable or non-viable options in a modeling context. A.REI.A.1: Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method. A.REI.B.3: Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters. A.REI.C.5: Verify that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions. A.REI.C.6: Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables. A.REI.D.12: Graph the solutions to a linear inequality in two variables as a half- plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	method (substitution or elimination). ● graph linear inequalities and systems of linear inequalities.
Lesson 1: Solving Equations	
Lesson Objectives 1. justify each step in solving a linear equation. ○ correlation: A.REI.A.1 2. write equations to model and solve mathematical and real-world problems. ○ correlation: A.REI.B.3, A.CED.A.1	Assessments ● Objective 1: U1A1: Solving Equations ● Objective 2: U1A1: Solving Equations
Lesson 2: Solving Inequalities	
Lesson Objectives 1. solve linear inequalities. ○ correlation: A.REI.B.3 2. graph the solutions of linear inequalities.	Assessments ● Objective 1: U1A2: Solving Inequalities ● Objective 2: U1A2: Solving Inequalities

○ correlation: A.REI.B.3	
Lesson 3: Using Substitution to Solve Systems of Equations	
Lesson Objectives 1. solve a system of equations using substitution. ○ correlation: A.REI.C.5, A.REI.C.6	Assessments ● Objective 1: U1A3: Using Substitution to Solve Systems of Equations
Lesson 4: Using Elimination to Solve Systems of Equations	
Lesson Objectives 1. solve a system of equations using elimination with addition or subtraction. ○ correlation: A.REI.C.5, A.REI.C.6 2. solve a system of equations using elimination with multiplication. ○ correlation: A.REI.C.5	Assessments ● Objective 1: U1A4: Using Elimination to Solve Systems of Equations ● Objective 2: U1A4: Using Elimination to Solve Systems of Equations
Lesson 5: Applications of Systems of Equations	
Lesson Objectives 1. choose the best method for solving a system of equations. ○ correlation: A.REI.C.5 2. solve real-world problems involving systems of equations. ○ correlation: A.REI.C.5	Assessments ● Objective 1: U1A5: Applications of Systems of Equations ● Objective 2: U1A5: Applications of Systems of Equations
Lesson 6: Linear Inequalities and Systems of Linear Inequalities	
Lesson Objectives 1. graph a linear inequality ○ correlation: A.REI.B.3 2. solve a system of linear inequalities by graphing. ○ correlation: A-CED.A.3, A.REI.D.12	Assessments ● Objective 1: U1A6: Linear Inequalities and Systems of Linear Inequalities ● Objective 2: U1A6: Linear Inequalities and Systems of Linear Inequalities

Unit 2: Functions Review

Idaho Standards	Unit Objectives

A.CED.A.1: Create one-variable equations and inequalities to solve problems, including linear, quadratic, rational, and exponential functions. F.IF.A.1: Demonstrate understanding that a function is a correspondence from one set (called the domain) to another set (called the range) that assigns to each element of the domain exactly one element of the range: If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$. F.IF.A.2: Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. F.IF.B.5: Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function. F.IF.C.8: Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. F.IF.8.C.b: Use the properties of exponents to interpret expressions for exponential functions. F.BF.A.1.b: Write a function that describes a relationship between two quantities. Functions could include linear, exponential, quadratic, simple rational, radical, logarithmic, and trigonometric. Combine standard function types using arithmetic operations. F.BF.B.4.a: Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. For example, f(x) =2 x3 or f(x) = (x+1)/(x– 1) for x ≠ 1. F.BF.B.4.c: Read values of an inverse function from a graph or a table, given that the function has an inverse. F.LE.A.1: Distinguish between situations that can be modeled with linear functions and with exponential functions. F.LE.A.1.a: Distinguish between situations that can be modeled with linear functions and with exponential functions. Demonstrate that linear functions grow by equal differences	● identify functions, domain, range, and find the inverse of a function using function notation. ● perform arithmetic operations on functions. ● graph exponential functions and identify key features. ● write and solve exponential growth and decay functions.

over equal intervals, and that exponential functions grow by equal factors over equal intervals. F.LE.A.1.b: Distinguish between situations that can be modeled with linear functions and with exponential functions. Identify situations in which one quantity changes at a constant rate per unit interval relative to another. F.LE.A.1.c: Distinguish between situations that can be modeled with linear functions and with exponential functions. Identify situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another. F.LE.A.2: Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). F.LE.A.5: Interpret the parameters in a linear or exponential function (of the form $f(x) = b\text{^}x + k$) in terms of a context.	
Lesson 1: Functions and Relations	
Lesson Objectives 1. find the domain and range of a relation. ○ correlation: F.IF.A.1, F.IF.B.5 2. determine if a relation is a function. ○ correlation:F.IF.A.1 3. find the inverse of a function. ○ correlation: F.IF.A.2, F.BF.B.4.a, F.BF.B.4.c	Assessments ● Objective 1: U2A1: Functions and Relations ● Objective 2: U2A1: Functions and Relations, U2D1: Two Functions and a Lie ● Objective 3: U2A1: Functions and Relations
Lesson 2: Evaluating Functions	
Lesson Objectives 1. evaluate functions. ○ correlation: F.IF.A.2 2. combine functions using arithmetic operations. ○ correlation: F.IF.C.8, F.BF.A.1.b 3. find the inverse of a function using function notation.	Assessments ● Objective 1: U2A2: Evaluating Functions ● Objective 2: U2A2: Evaluating Functions ● Objective 3: U2A2: Evaluating Functions

○ correlation: F.IF.A.2, F.BF.B.4.a, F.BF.B.4.c	
Lesson 3: Graphing Exponential Functions	
Lesson Objectives 1. graph an exponential function. ○ correlation: F.LE.A.1, F.LE.A.1.a 2. identify the key features of an exponential function. ○ correlation: F.IF.8.C.b, F.LE.A.1, F.LE.A.1.a	Assessments ● Objective 1: U2A3: Graphing Exponential Functions ● Objective 2: U2A3: Graphing Exponential Functions
Lesson 4: Applications of Exponential Functions	
Lesson Objectives 1. write exponential growth and decay functions. ○ correlation: A.CED.A.1, F.LE.A.1.b, F.LE.A.1.c 2. solve problems involving exponential growth and decay. ○ correlation: F.LE.A.2, F.LE.A.5	Assessments ● Objective 1: U2A4: Applications of Exponential Functions ● Objective 2: U2A4: Applications of Exponential Functions

Unit 3: Special Functions

Idaho Standards	Unit Objectives
F.IF.A.2: Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. F.IF.C.7.b: Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. F.IF.C.8: Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. N.RN.A.1: Explain how the definition of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define 51/3 to be the cube root of 5 because we want (51/3)3 = 5(1/3)3 to hold, so (51/3)3 must equal 5. N.RN.A.2: Rewrite expressions involving radicals and rational	● simplify, multiply, and divide radical expressions using properties of exponents. ● convert between rational exponents and radical expressions. ● evaluate, graph, and write absolute value functions, piecewise-defined functions, step functions, and greatest integer functions.

exponents using the properties of exponents.	
Lesson 1: Simplifying Radicals	
Lesson Objectives 1. simplify radical expressions. ○ correlation: N.RN.A.1 2. multiply and divide radical expressions. ○ correlation: N.RN.A.2	Assessments ● Objective 1: U3A1: Simplifying Radicals ● Objective 2: U3A1: Simplifying Radicals
Lesson 2: Operations with Radicals	
Lesson Objectives 1. describe what radicals look like. ○ correlation: N.RN.A.1 2. combine radicals. ○ correlation: N.RN.A.2	Assessments ● Objective 1: U3A2: Operations with Radicals ● Objective 2: U3A2: Operations with Radicals
Lesson 3: Rational Exponents	
Lesson Objectives 1. define how the properties of exponents help simplify expressions with rational exponents. ○ correlation: N.RN.A.2 2. use rational exponents to simplify radical expressions. ○ correlation: N.RN.A.2	Assessments ● Objective 1: U3A3: Rational Exponents ● Objective 2: U3A3: Rational Exponents
Lesson 4: Absolute Value Functions	
Lesson Objectives 1. identify key features of an absolute value function. ○ correlation: F.IF.C.7.b 2. graph an absolute value function. ○ correlation: F.IF.C.7.b 3. write absolute value functions. ○ correlation: F.IF.C.8	Assessments ● Objective 1: U3A4: Absolute Value Functions, U3D1: No Solution? ● Objective 2: U3A4: Absolute Value Functions ● Objective 3: U3A4: Absolute Value Functions
Lesson 5: Piecewise-Defined Functions	

Lesson Objectives 1. evaluate piecewise-defined functions. ○ correlation: F.IF.A.2 2. graph piecewise-defined functions. ○ correlation: F.IF.C.7.b 3. write piecewise-defined functions. ○ correlation: F.IF.C.8	Assessments ● Objective 1: U3A5: Piecewise-Defined Functions ● Objective 2: U3A5: Piecewise-Defined Functions ● Objective 3: U3A5: Piecewise-Defined Functions
Lesson 6: Step Functions	
Lesson Objectives 1. evaluate step functions. ○ correlation: F.IF.A.2 2. graph step functions. ○ correlation: F.IF.C.7.b 3. evaluate greatest integer functions. ○ correlation: F.IF.A.2 4. model step functions. ○ correlation: F.IF.C.8	Assessments ● Objective 1: U3A6: Step Functions ● Objective 2: U3A6: Step Functions ● Objective 3: U3A6: Step Functions ● Objective 4: U3A6: Step Functions

Unit 4: Variable Data

Idaho Standards	Unit Objectives
S.ID.A.2: Represent data with plots on the real number line (dot plots, histograms, and box plots). S.ID.A.3: Compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different variables, using statistics appropriate to the shape of the distribution for each measurement variable. S.ID.A.4: Interpret differences in shape, center, and spread in the context of the variables accounting for possible effects of extreme data points (outliers) for measurement variables. S.ID.B.6: Represent data on two categorical variables on a clustered bar chart and describe how the variables are related. Summarize categorical data for two categories in two-way	● work with data to create dot plots, histograms, and box plots by identifying the five-number summary for the data. ● construct and interpret two-way frequency tables. ● graph data on a scatterplot. ● calculate a linear regression model and interpret the slope and y-intercept of that equation. ● use technology to calculate the correlation coefficient and interpret its meaning.

frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data. S.ID.B.7: Represent data on two quantitative variables on a scatter plot, and describe how the variables are related. S.ID.B.7.c: Informally assess the fit of a function by plotting and analyzing residuals. S.ID.B.7.a: Fit a linear function to data where a scatter plot suggests a linear relationship S.ID.C.8: Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data. S.ID.C.9: Compute (using technology) and interpret the correlation coefficient of a linear fit. S.ID.C.10: Distinguish between correlation and causation. S.CP.A.4: Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities.	
Lesson 1: Graphing One-Variable Data	
Lesson Objectives 1. represent data with a dot plot, histogram, and box plot. ○ correlation: S.ID.A.2 2. determine the five-number summary for a data set. ○ correlation: S.ID.A.3 3. use the interquartile range of a data set to identify outliers. ○ correlation: S.ID.A.4	Assessments ● Objective 1: U4A1: Graphing One-Variable Data ● Objective 2: U4A1: Graphing One-Variable Data ● Objective 3: U4A1: Graphing One-Variable Data
Lesson 2: Analyzing One-Variable Data	
Lesson Objectives 1. analyze the center, shape, and spread of data. ○ Correlation: S.ID.A.4, S.ID.A.3 2. compare two or more data sets.	Assessments ● Objective 1: U4A2: Analyzing One-Variable Data ● Objective 2: U4A2: Analyzing One-Variable Data

○ correlation: S-ID.2	
Lesson 3: Two-Variable Categorical Data	
Lesson Objectives 1. construct a two-way frequency table. ○ Correlation: S-CP.A.4 2. interpret relative frequencies in a two-way frequency table. ○ correlation: S.ID.A.4	Assessments ● Objective 1: U4A3: Two-Variable Categorical Data ● Objective 2: U4A3: Two-Variable Categorical Data
Lesson 4: Two-Variable Quantitative Data	
Lesson Objectives 1. graph data on a scatterplot. ○ correlation: S-ID.B.7 2. determine correlation and trends of bivariate data. ○ correlation: S.ID.B.6 3. calculate a linear regression model. ○ correlation: S-ID.B.7.a 4. make predictions using a best fit model. ○ correlation: S-ID.C.8 5. interpret the slope and y-intercept of a linear regression model. ○ correlation: S-ID.C.8 6. compute and interpret a correlation coefficient. ○ correlation: S.ID.C.9 7. Find and use residuals to analyze the line of best fit. ○ correlation: S-ID.B.7.c 8. Distinguish between correlation and causation ○ correlation: S-ID.C.10	Assessments ● Objective 1: U4A4: Two-Variable Quantitative Data ● Objective 2: U4A4: Two-Variable Quantitative Data, ● Objective 3: U4A4: Two-Variable Quantitative Data ● Objective 4: U4A4: Two-Variable Quantitative Data ● Objective 5: U4A4: Two-Variable Quantitative Data ● Objective 6: U4A4: Two-Variable Quantitative Data ● Objective 7: U4A4: Two-Variable Quantitative Data ● Objective 8: U4A4: Two-Variable Quantitative Data

Unit 5: Polynomials

Idaho Standards	Unit Objectives
A.SSE.A.1.a: Interpret parts of an expression, such as terms,	● classify a polynomial based on its degree and number of

factors, and coefficients. A.SSE.B.3.a: Factor a quadratic expression to reveal the zeros of the function it defines. A.APR.A.1.a: Demonstrate understanding that polynomials form a system analogous to the integers; namely, they are closed under certain operations. Perform operations on polynomial expressions (addition, subtraction, multiplication, division) and compare the system of polynomials to the system of integers when performing operations.	terms ● simplify, add, subtract, and multiply polynomials. ● factor polynomials using the greatest common factor or factoring by grouping.
Lesson 1: Polynomials	
Lesson Objectives 1. classify a polynomial by its degree and number of terms. ○ correlation: A-SSE.A.1.a 2. simplify polynomial expressions by combining like terms. ○ correlation: A-APR.A.1.a 3. add and subtract polynomials. ○ correlation: A-APR.A.1.a	Assessments ● Objective 1: U5A1: Polynomials, U5D1: Polynomial Clues ● Objective 2: U5A1: Polynomials ● Objective 3: U5A1: Polynomials
Lesson 2: Multiplying Polynomials	
Lesson Objectives 1. multiply polynomials algebraically. ○ correlation: A-APR.A.1.a	Assessments ● Objective 1: U5A2: Multiplying Polynomials
Lesson 3: Factoring Polynomials	
Lesson Objectives 1. factor using the greatest common factor. ○ correlation: A-SSE.B.3.a 2. factor polynomials with four terms by grouping. ○ correlation: A-SSE.B.3.a	Assessments ● Objective 1: U5A3: Factoring Polynomials ● Objective 2: U5A3: Factoring Polynomials

Unit 6: Trinomials

Idaho Standards	Unit Objectives

A.SSE.B.3.a: Factor a quadratic expression to reveal the zeros of the function it defines. A.APR.C.4: Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity (x2 + y2)^2 = (x2 – y2)^2 + (2xy)^2 can be used to generate Pythagorean triples.	● factor trinomials in the form algebraically. ● factor perfect square trinomials. ● factor the difference of two squares.
Lesson 1: Factoring Trinomials Part 1	
Lesson Objectives 1. factor trinomials in the form x^2 + bx + c algebraically. ○ correlation: A-SSE.B.3.a	Assessments ● Objective 1: U6A1: Factoring Trinomials x^2+bx+c
Lesson 2: Factoring Trinomials Part 2	
Lesson Objectives 1. factor trinomials in the form ax^2 + bx + c algebraically. ○ correlation: A-SSE.B.3.a	Assessments ● Objective 1: U6A2: Factoring Trinomials Ax^2+Bx+C
Lesson 3: Factoring Special Cases	
Lesson Objectives 1. factor perfect square trinomials. ○ correlation: A-SSE.B.3.a, A-APR.C.4 2. factor the difference of two squares. ○ correlation: A-SSE.B.3.a, A-APR.C.4	Assessments ● Objective 1: U6A3: Factoring Special Cases ● Objective 2: U6A3: Factoring Special Cases

Unit 7: Quadratic Equations

Idaho Standards	Unit Objectives
A.CED.A.1: Create one-variable equations and inequalities to solve problems, including linear, quadratic, rational, and exponential functions. A.SSE.B.3.a: Factor a quadratic expression to reveal the zeros of the function it defines.	● solve quadratic equations using factoring, square roots, completing the square, or the quadratic formula. ● write quadratic equations from real-world situations.

A.SSE.B.3.c: Use the properties of exponents to transform expressions for exponential functions. A.REI.B.4.a: Use the method of completing the square to transform any quadratic equation in x into an equation of the form (x – p)^2 = q that has the same solutions. Derive the quadratic formula from this form. A.REI.B.4.b: Solve quadratic equations by inspection (e.g., for x^2 = 49), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as a ± bi for real numbers a and b.	
Lesson 1: Solving Quadratic Equations by Factoring	
Lesson Objectives 1. use the Zero Product Property to find the roots of a quadratic equation. ○ correlation: A-SSE.B.3.a 2. solve quadratic equations by factoring. ○ correlation: A-SSE.B.3.a	Assessments ● Objective 1: U7A1: Solving Quadratic Equations by Factoring ● Objective 2: U7A1: Solving Quadratic Equations by Factoring
Lesson 2: Solving Quadratic Equations Using Square Roots	
Lesson Objectives 1. solve quadratic equations using square roots. ○ correlation: A-SSE.B.3.c, A-REI.B.4.b 2. solve literal equations and formulas that are quadratic equations. ○ correlation: A-REI.B.4.b	Assessments ● Objective 1: U7A2: Solving Quadratic Equations Using Square Roots ● Objective 2: U7A2: Solving Quadratic Equations Using Square Roots
Lesson 3: Solving Quadratic Equations by Completing the Square	
Lesson Objectives 1. create perfect square trinomials by completing the square. ○ correlation: A-REI.B.4.a	Assessments ● Objective 1: U7A3: Solving Quadratic Equations by Completing the Square ● Objective 2: U7A3: Solving Quadratic Equations by

2. solve quadratic equations by completing the square. ○ correlation: A-REI.B.4.b	Completing the Square
Lesson 4: Solving Quadratic Equations Using the Quadratic Formula	
Lesson Objectives 1. derive the quadratic formula. ○ correlation: A-REI.B.4.a 2. solve quadratic equations using the quadratic formula. ○ correlation: A-REI.B.4.b 3. use the discriminant to determine the number of roots for a quadratic equation. ○ correlation: A-REI.B.4.a	Assessments ● Objective 1: U7A4: Solving Quadratic Equations Using the Quadratic Formula ● Objective 2: U7A4: Solving Quadratic Equations Using the Quadratic Formula ● Objective 3: U7A4: Solving Quadratic Equations Using the Quadratic Formula
Lesson 5: Creating Quadratic Equations	
Lesson Objectives 1. write and solve quadratic equations. ○ correlation: A-CED.A.1	Assessments ● Objective 1: U7A5: Creating Quadratic Equations, U7D1: Preferred Method of Solving

Unit 8: Quadratic Functions

Idaho Standards	Unit Objectives
A.APR.B.3: Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. A.REI.B.4.a: Use the method of completing the square to transform any quadratic equation in x into an equation of the form (x – p)^2 = q that has the same solutions. Derive the quadratic formula from this form. A.REI.C.7: Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line y = –3x and the circle x^2 + y^2 = 3. F.IF.A.1: Demonstrate understanding that a function is a	● identify and find key features of quadratic functions. ● solve quadratic functions. ● write and graph quadratic equations in standard form or vertex form. ● solve systems of equations where one equation is linear and the second is non-linear.

correspondence from one set (called the domain) to another set (called the range) that assigns to each element of the domain exactly one element of the range: If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.. F.IF.B.4: For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. F.IF.C.7.a: Graph linear and quadratic functions and show intercepts, maxima, and minima. F.IF.C.7.c: Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. F.IF.C.8: Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. F.LE.A.1: Distinguish between situations that can be modeled with linear functions and with exponential functions.	
Lesson 1: Graphing Quadratic Functions Using Standard Form	
Lesson Objectives 1. identify the key features of a quadratic function. ○ correlation: F.IF.B.4 2. graph a quadratic function written in standard form. ○ correlation: F.IF.C.7.c, F.IF.A.1 3. compare quadratic functions. ○ correlation: F.IF.B.4	Assessments ● Objective 1: U8A1: Graphing Quadratic Functions Using Standard Form ● Objective 2: U8A1: Graphing Quadratic Functions Using Standard Form ● Objective 3: U8A1: Graphing Quadratic Functions Using Standard Form
Lesson 2: Solving Quadratic Equations by Graphing	
Lesson Objectives 1. find the zeros (x-intercepts) of quadratic function. ○ correlation: F.IF.B.4, A.APR.B.3	Assessments ● Objective 1: U8A2: Solving Quadratic Equations by Graphing

2. solve a quadratic equation by graphing. ○ correlation: F.IF.C.7.a	● Objective 2: U8A2: Solving Quadratic Equations by Graphing
Lesson 3: Graphing Quadratic Equations Using Vertex Form	
Lesson Objectives 1. graph quadratic functions written in vertex form. ○ correlation: F.IF.C.7.a 2. write a quadratic function in vertex form. ○ correlation: F.IF.C.8, A.REI.B.4.a	Assessments ● Objective 1: U8A3: Graphing Quadratic Equations Using Vertex Form ● Objective 2: U8A3: Graphing Quadratic Equations Using Vertex Form
Lesson 4: Linear, Exponential, and Quadratic Models	
Lesson Objectives 1. compare linear, exponential, and quadratic models. ○ correlation: F.LE.A.1 2. solve a system of linear and exponential equations. ○ correlation: A.REI.C.7 3. solve a system of linear and quadratic equations. ○ correlation: A.REI.C.7	Assessments ● Objective 1: U8A4: Linear, Exponential, and Quadratic Models ● Objective 2: U8A4: Linear, Exponential, and Quadratic Models ● Objective 3: U8A4: Linear, Exponential, and Quadratic Models