

UNIT ONE

Equation Solving

Related NYS CCLS

N-RN.3 Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

N-Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

N-Q.2 Define appropriate quantities for the purpose of descriptive modeling.

A-CED.1 Create equations and inequalities in one variable and use them to solve problems.

A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.

A-CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

A-REI.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.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

A-SSE.1 Interpret expressions that represent a quantity in terms of its context.

F-LE.5 Interpret the parameters in a linear or exponential function in terms of a context.

I CAN ...

- ✓ I can perform multi-step evaluation using the order of operations
- ✓ I can identify the number system that describes the result of a calculation(s).
- ✓ I can explain why that result occurs.
- ✓ I can identify properties of real numbers

- ✓ I can solve multi-step equations using combining like terms and/or the distributive property.
- ✓ I can solve equations that result from the cross multiplication of a proportion
- ✓ I can solve a literal equation.
- ✓ I can solve and graph inequalities in one variable.
- ✓ I can justify the steps in a solution using properties of equations and inequalities.
- ✓ I can identify an equation or inequality that has no solutions.
- ✓ I can identify an equation or inequality that has infinite solutions.

- ✓ I can write a let statement.
- ✓ I can write equations to represent a given context.
- ✓ I can solve a problem of the form $\text{Quantity 1} + \text{Quantity 2} + \dots = \text{Quantity Total}$
- ✓ I can solve a problem of the form $\text{Weighted Quantity 1} + \text{Weighted Quantity 2} + \dots = \text{Quantity Total}$
- ✓ I can solve a problem of the form $\text{Quantity 1} = \text{Quantity 2}$

- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Number Systems	Solving Equations	Problem Solving
Notes		

UNIT TWO

Solving Inequalities

Related NYS CCLS

A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.

A-CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

A-REI.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.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

N-Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

N-Q.2 Define appropriate quantities for the purpose of descriptive modeling.

A-SSE.1 Interpret expressions that represent a quantity in terms of its context.

A-CED.1 Create equations and inequalities in one variable and use them to solve problems.

A-CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.

A-REI.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.

F-LE.5 Interpret the parameters in a linear or exponential function in terms of a context.

I CAN ...

- ✓ I can solve and graph inequalities in one variable.
- ✓ I can solve and graph compound inequalities involving the union (OR).
- ✓ I can solve and graph compound inequalities involving the intersection (AND).
- ✓ I can write my inequality solutions using interval notation.
- ✓ I can justify the steps in a solution using properties of inequalities.
- ✓ I can identify an inequality that has no solutions.
- ✓ I can identify an inequality that has infinite solutions.

- ✓ I can write inequalities to represent a given context.
- ✓ I can solve an inequality problem.

- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Inequalities	Problem Solving
• Inequality Notes	

UNIT THREE
Functions and Linear Functions

Related NYS CCLS

F-IF.1 Understand that a function from one set (called the domain) to another set (called the range) 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.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.3 Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.

F-IF.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.

F-IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

F-IF.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.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

a. linear functions

F-IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function

F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

F-BF.1 Write a function that describes a relationship between two quantities.

a. Determine an explicit expression, a recursive process, or steps for calculation from a context.

F-LE.1a/b Distinguish between situations that can be modeled with linear functions and with exponential functions.

a. Prove that linear functions grow by equal differences over equal intervals

b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.

F-LE.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.5 Interpret the parameters in a linear or exponential function in terms of a context.

A-REI.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).

A-REI.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.

S-ID.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.

a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.

b. Informally assess the fit of a function by plotting and analyzing residuals.

c. Fit a linear function for a scatter plot that suggests a linear association.

S-ID.7 Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data

S-ID.8 Compute (using technology) and interpret the correlation coefficient of a linear fit.

S-ID.9 Distinguish between correlation and causation.

I CAN ...

✓ I can identify a function graphically.

✓ I can identify a function in a table.

✓ I can identify a function in equation-form.

✓ I can identify a function in context.

✓ I can identify the family of which a function is a member. (linear, quadratic, cubic, radical, rational, exponential, piece-wise, absolute value)

✓ I can identify the domain and range of a function

✓ I can identify intervals of increasing and decreasing from a graph or a table

- ✓ I can evaluate a function using function notation.
- ✓ I can write an equation in function notation.

- ✓ I can identify an arithmetic sequence in list, recursive and explicit form.
- ✓ I can write an explicit formula for an arithmetic sequence.
- ✓ I can write a recursive formula for an arithmetic sequence.

- ✓ I can find a rate of change graphically.
- ✓ I can find a rate of change from a table.
- ✓ I can find a rate of change given 2 points in time.
- ✓ I can find a rate of change given a context.
- ✓ I can use the slope formula

- ✓ I can find the x- and y- intercepts given an equation or a graph.

- ✓ I can graph a line.
- ✓ I can graph 'special lines'- horizontal and vertical.
- ✓ I can graph a linear inequality.
- ✓ I can graph a scatter plot by hand and on the calculator.
- ✓ I can graph a residual plot by hand and on the calculator.

- ✓ I can write a linear equation in point-slope form.
- ✓ I can convert an equation from point-slope form or standard form into slope-intercept form.
- ✓ I can write the equation of a line that is parallel to a given line.
- ✓ I can write the equation of a line that is perpendicular to a given line.

- ✓ I can find a line of best fit by hand and using the calculator.
- ✓ I can use a linear regression to make a prediction about a situation.
- ✓ I can assess the 'fit' of a regression using the correlation coefficient and the residuals.
- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Functions	Sequences	Graphing Lines / Inequalities	Writing the Equations of Lines	Regressions
<ul style="list-style-type: none"> • Recording Sheet • Piecewise matching 	<ul style="list-style-type: none"> • Recursive vs. Explicit Activity 	<ul style="list-style-type: none"> • Graphing Notes • Graphing inequality Notes 	<ul style="list-style-type: none"> • Investigating Linear Relationships 	<ul style="list-style-type: none"> • Using your calculator Notes

UNIT FOUR

Systems of Linear Equations and Inequalities

Related NYS CCLS

- N-Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
- N-Q.2 Define appropriate quantities for the purpose of descriptive modeling.
- A-REI.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.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
- A-REI.5 Prove 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.6 Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
- A-REI.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).
- A-REI.11 Explain why the *x-coordinates* of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations.
- A-REI.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.

I CAN ...

- ✓ I can graph two lines and find their intersection point.
- ✓ I can use substitution to find the (x,y) values that make a system of 2 linear equations true.
- ✓ I can use elimination to find the (x,y) values that make a system of 2 linear equations true.
- ✓ I can use my calculator to find the (x,y) values that make a system of 2 linear equations true.
- ✓ I can identify consistent and inconsistent systems graphically and algebraically.
- ✓ I can write a system of equations or inequalities given a context.
- ✓ I can explain what the solution to a system of equations or inequalities represents in its given context.
- ✓ I can graph a system of linear inequalities
- ✓ I can identify a point that IS in the solution and a point that IS NOT in the solution to a system of linear inequalities.
- ✓ I can check my solution to a system of linear equations or inequalities.
- ✓ I can decide which method is the most efficient for a given system and justify my method.
- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Graphing	Substitution	Elimination
<ul style="list-style-type: none"> ● Graphing Systems Notes 	<ul style="list-style-type: none"> ● The Substitution Method Notes 	

UNIT FIVE
Statistics

Related NYS CCLS

S-ID.1 Represent data with plots on the real number line (dot plots, histograms, and box plots).

S-ID.2 Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.

S-ID.3 Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

S-ID.5 Summarize categorical data for two categories in two-way 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.

I CAN ...

- ✓ I can calculate mean of a set of data or a table of data (by hand and using my calculator).
- ✓ I can calculate median of a set of data or a table of data (by hand and using my calculator).
- ✓ I can identify the mode of a set of data or a table of data (by hand).
- ✓ I can identify the quartiles of a set of data or a table of data (by hand or using my calculator).
- ✓ I can calculate the Interquartile range (by hand).
- ✓ I can calculate the population and sample standard deviation (using my calculator).
- ✓ I can identify outliers in a set of data.

- ✓ I can draw a dot plot for a set of data.
- ✓ I can draw a box plot for a set of data.
- ✓ I can create a frequency table and draw a frequency histogram for a set of data.
- ✓ I can create a cumulative frequency table and draw a cumulative frequency histogram for a set of data.
- ✓ I can analyze a statistic graph and create meaning.
- ✓ I can compare two sets of data by analyzing their shape, center, and spread.

- ✓ I can build a two-way frequency table.
- ✓ I can calculate a two-way relative frequency table.
- ✓ I can calculate a two-way conditional relative frequency table (by rows).
- ✓ I can calculate a two-way conditional relative frequency table (by columns).
- ✓ I can analyze joint and marginal values from a two-way table in order to make inferences about the situation it describes.

- ✓ I can explain my understanding of math concepts.

- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Statistical Calculations	Statistical Graphs	Interpretations
<ul style="list-style-type: none"> ● Stations 		

UNIT SIX Polynomials

Related NYS CCLS

- N-Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
- N-Q.2 Define appropriate quantities for the purpose of descriptive modeling.
- A-SSE.1 Interpret expressions that represent a quantity in terms of its context.
- a. Interpret parts of an expression, such as terms, factors, and coefficients.
- A-SSE.2 Use the structure of an expression to identify ways to rewrite it.
- A-SSE.3 Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
- a. Factor a quadratic expression to reveal the zeros of the function it defines.
 - b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.
- A-APR.1 Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
- A-APR.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.CED.1 Create equations and inequalities in one variable and use them to solve problems.
- A.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
- A.REI.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.4 Solve quadratic equations in one variable.
- 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.
 - 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.
- F-IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
- a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
- F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
- F-LE.5 Interpret the parameters in a linear or exponential function in terms of a context.

I CAN...

- ✓ I can add polynomials.
- ✓ I can subtract polynomials.
- ✓ I can multiply polynomials using repeated distributive property.
- ✓ I can divide polynomials by monomials using rules of exponents.
- ✓ I can factor polynomials that can be factored once.
- ✓ I can factor polynomials completely.
- ✓ I can simplify radicals

- ✓ I can recognize situations that require operations with polynomials.
- ✓ I can solve quadratics using simple square root method.
- ✓ I can solve quadratics using the zero product rule.
- ✓ I can solve quadratics using the method of completing the square.
- ✓ I can solve quadratics using the quadratic formula.
- ✓ I can decide which method is the most efficient for a given quadratic and justify my method.
- ✓ I can write and solve a quadratic equation to model a situation.
- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Polynomial Operations	Solving
<ul style="list-style-type: none"> • Algebra Tile Notes • What is factoring? 	<ul style="list-style-type: none"> • Completing the Square Notes

UNIT SEVEN
Parabolas

Related NYS CCLS

A-APR.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.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

A.REI.4 Solve quadratic equations in one variable.

- 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.
- 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.

A-REI.5 Prove 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.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).

A.REI.11 Explain why the x -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations.

F-IF.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.

F-IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.

F-IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

- a. Graph linear and quadratic functions and show intercepts, maxima, and minima.

F-IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

- a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.

F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

F-BF.1 Write a function that describes a relationship between two quantities.

F-BF.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.

S-ID.6 6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.

- a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.
- b. Informally assess the fit of a function by plotting and analyzing residuals.

I CAN ...

✓ I can find the axis of symmetry both algebraically and graphically.

✓ I can find the vertex both algebraically and graphically.

✓ I can identify the vertex and axis of symmetry using vertex form.

✓ I can find the roots graphically.

✓ I can use my calculator to find key features of a parabola.

✓ I can use a table of values to graph a parabola.

✓ I can use the graph of a parabola to model data.

✓ I can use my calculator to perform a quadratic regression.

✓ I can use residuals and correlation coefficient to assess the fit of a quadratic model.

- ✓ I can convert from vertex-form to standard form.
- ✓ I can use completing the square to convert standard form to vertex-form
- ✓ I can solve a linear-quadratic system graphically.
- ✓ I can solve a linear-quadratic system algebraically.

- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Key Features and Graphs	Vertex-Form	Systems	Regressions
<ul style="list-style-type: none"> • Calculator Investigation • Key Feature Notes 	<ul style="list-style-type: none"> • Find the Pattern 		<ul style="list-style-type: none"> • Revisiting Regression • Which Model

UNIT EIGHT

Exponential Functions

Related NYS CCLS

- N-Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
- N-Q.2 Define appropriate quantities for the purpose of descriptive modeling.
- N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
- A.SSE-1 Interpret expressions that represent a quantity in terms of its context.
- Interpret parts of an expression, such as terms, factors, and coefficients.
 - Interpret complicated expressions by viewing one or more of their parts as a single entity.
- A-SSE.3 Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
- Use the properties of exponents to transform expressions for exponential functions.
- A-CED.1 Create equations and inequalities in one variable and use them to solve problems.
- A.CED.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
- F-IF.3 Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers.
- F-IF.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.
- F-IF.5 Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
- F-IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
- F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
- F-BF.1 Write a function that describes a relationship between two quantities.
- Determine an explicit expression, a recursive process, or steps for calculation from a context.
- F-LE.1 Distinguish between situations that can be modeled with linear functions and with exponential functions.
- Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
 - Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
 - Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.
- F-LE.2 Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs
- F-LE.3 Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.
- F-LE.5 Interpret the parameters in a linear or exponential function in terms of a context.
- S-ID.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
- Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.
 - Informally assess the fit of a function by plotting and analyzing residuals.

I CAN...

- ✓ I can recognize exponential growth and exponential decay.

- ✓ I can determine the growth rate or the decay rate.
- ✓ I can recognize a geometric sequence in list, explicit or recursive form.
- ✓ I can write a explicit formula to represent an geometric sequence.
- ✓ I can write a recursive formula to represent a geometric sequence.
- ✓ I can write and solve an exponential equation to model a situation.
- ✓ I can use my calculator to perform an exponential regression.
- ✓ I can use residuals and correlation coefficient to assess the fit of a exponential model.
- ✓ I can identify and describe the differences between a linear, a quadratic and an exponential function in terms of first and second differences.
- ✓ I can explain my understanding of math concepts.
- ✓ I can identify errors in math problems.
- ✓ I can apply my understanding to new and novel situations.

KEY RESOURCES

Growth	Decay	Sequences	Comparisons
<ul style="list-style-type: none"> • Grain of Wheat • Foldable 	<ul style="list-style-type: none"> • M & M activity • Foldable 	<ul style="list-style-type: none"> • Sequence Wrap Up • Foldable 	<ul style="list-style-type: none"> • Investigation: Comparison • Recording Sheet: Comparisons