ALGEBRA 1A CURRICULUM



REGION 14 SCHOOL DISTRICT
VISION OF A LEARNER

Grade Level(s): 9

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Course Description: Algebra 1A/1B is a 2 year sequence covering the same content of Algebra 1; however, extra emphasis will be placed on the development of prerequisite skills and problem solving strategies in order to ensure all students can successfully master the concepts of Algebra. In these courses, students will learn through cooperative investigations of the major topics of Algebra. The goals of this course are to improve student mathematical literacy and problem solving skills. Topics in Algebra 1A include: one-variable statistics, linear equations, functions, linear functions, and linear inequalities in one- and two-variables.

Year At A Glance			
Unit Title	**Overarching Essential Question**	**Overarching Enduring Understanding**	**Vision of A Learner "I Can" Statements**
One Variable Statistics (5-7 weeks)	How can data be represented and interpreted to make real-world decisions?	Data can be represented in multiple graphical and numerical ways to reveal trends and insights.	DE4(9-12); TCC2(9-12); TCC3(9-12)
Linear Expressions and Equations (13-15 weeks)	What methods or strategies do you use to decide how to solve a problem? How does this extend to the validity of a solution to a problem?	To obtain a solution, one must utilize *inverse operations* to reverse mathematical processes in a systematic sequence, ensuring the equality remains balanced.	TI1(9-12); TCC3(9-12)
Linear Functions (12-13 weeks)	How can understanding linear functions and their multiple representations help us model real-world situations, interpret relationships, and problem solve effectively?	Understanding the different representations of functions - verbal, graphical, using tables, and algebraic - allows us to model real-world situations, identify relationships, make predictions, and solve problems effectively. Different representations provide unique insight into the behavior and characteristics of functions.	TCC2(9-12); TCC3(9-12)
Linear Inequalities in One and Two Variables (3-4 weeks)	Inequalities express a range of possible solutions, rather than a single answer.	What characteristics drive using an inequality instead of an equation?	P4(9-12)

Unit 1 - One Variable Statistics

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards (* indicates a modeling standard. For standards that encompass several different topics/concepts, the bolded part is the focus for this unit. If no bolding, the entire standard pertains to this unit.)

- **S.ID.A.1** Represent data with plots on the real number line (dot plots, histograms, and box plots).
- **S.ID.A.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.A.3** Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

Standards for Mathematical Practice

- MP1: Make sense of problems and persevere in solving them.
- MP2: Reason abstractly and quantitatively.
- MP3: Construct viable arguments and critique the reasoning of others.
- MP4: Model with mathematics.
- MP5: Use appropriate tools strategically.
- MP6: Attend to precision.
- MP7: Look for and make use of structure.
- MP8: Look for and express regularity in repeated reasoning.

Vision of A Learner Attributes: Students will be able to independently use their learning to... (“I can” statements to be demonstrated)

- **DE4(9-12)**: I can work respectfully with all members of my community and support the needs of others.
- **TCC2(9-12)**: I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
- **TCC3(9-12)**: I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that…	**Essential Questions:**
● Data can be represented in multiple graphical and numerical ways to reveal trends and insights.	● How can data be represented and interpreted to make real-world decisions?

• Measures of center and spread can be used to summarize quantitative data. • The context of data matters when interpreting statistical findings.	• What can measures of center and spread tell us about a data set? • How do outliers and distribution shape influence interpretation of data?
Students will know... • Data involving one quantitative variable can be displayed and analyzed using dot plots, histograms, and box plots. • Mean and median are used to describe and compare the center of a distribution; interquartile range (IQR) and standard deviation are used to describe and compare the spread of a distribution.	**Students will be able to...** • Create and interpret dot plots. • Create and interpret histograms. • Calculate the mean, median, mode, range, 5 number summary, and IQR. • Use technology to calculate the five-number summary and the standard deviation. • Interpret the standard deviation and compare the standard deviation between two data sets. • Create and interpret box plots. • Discuss the impact of outliers on the mean and the median.
Key Vocabulary: Dot Plot, Histogram, Frequency, Mean, Median, Mode, Range, Skewed Left, Skewed Right, Symmetric, Box Plot, Five Number Summary, Quartile, Interquartile Range, Outlier, Standard Deviation	
Assessment Evidence	
Performance Tasks: WS 1-4 - Students will collect data from their classmates and analyze the data graphically and by calculating summary statistics. **TCC2(9-12)** Unit 1 project - Students will find data online related to a topic of interest. Students will analyze the data graphically and by calculating summary statistics. **TCC3(9-12)**	**Other Evidence:** Quiz 1-1 - reading and interpreting histograms and dot plots; calculating one variable statistics; analyzing shape of graphs Quiz 1-2 - reading and interpreting box plots; comparing spread (standard deviation); impact of outliers on mean and median
Learning Plan	
The beginning of the school year begins by establishing routines, including the use of Building Thinking Classrooms in Mathematics as an instructional strategy, building community, and integrating to the expectations at the high school. **DE4(9-12)**	

We begin our one-variable statistics unit having students create, interpret, and analyze dot plots and histograms. Students use data from the dot plot to calculate the mean, median, mode, and range. We discuss the shapes of graphs, looking at skewness, and discussing how skewness impacts the mean and the median of the data. Students are assessed by WS 1-4, an in-class assignment, which requires them to collect data from their classmates and to analyze this data by creating graphs and by calculating summary statistics. **TCC2(9-12)** Students are also assessed on this first part of the unit by a quiz (quiz 1-1).

Next students learn how to calculate the 5 number summary and how the box plot (box and whisker plot) display the 5 number summary. Students learn about standard deviation and use the graphing calculator to calculate mean, standard deviation, and 5 number summary. Students are assessed by a quiz (quiz 1-2).

The final assessment for the unit is a project. Students find data online about a topic of their choosing. They analyze the data by calculating statistics and creating graphs. **TCC3(9-12)**

Teacher Resources: IM Algebra 1 Unit 1: One-Variable Statistics; Amplify Desmos; IXL; Khan academy; teacher created worksheets and assessments; interactive notebook pages; Socrative; Blooket; Quizizz; Kahoot

Unit 2 - Linear Expressions and Equations

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards (* indicates a modeling standard. For standards that encompass several different topics/concepts, the bolded part is the focus for this unit. If no bolding, the entire standard pertains to this unit.)

- **A.CED.A.1 Create equations and inequalities in one variable and use them to solve problems. *Include equations arising from linear** and quadratic functions, and simple rational and exponential **functions.***
- **A.CED.A.3 Represent constraints using equations**, inequalities, or systems thereof, **while evaluating solutions for viability within a modeling framework**. *For instance, use inequalities to describe dietary or budgetary restrictions regarding food pairings*.
- **A.REI.A.1** Explain each step in solving a simple equation as follows 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.SSE.A.1** Interpret expressions that represent a quantity in terms of its context.*
    - **A.SSE.A.1.A** Interpret parts of an expression, such as terms, factors, and coefficients.
- **A.SSE.A.2** Use the structure of an expression to identify ways to rewrite it.
- **A.SSE.B.3** Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the

expression.*

- **N.Q.A.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.A.2** Define appropriate quantities for the purpose of describing modeling.
- **N.Q.A.3** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Standards for Mathematical Practice

- MP1: Make sense of problems and persevere in solving them.
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- MP3: Construct viable arguments and critique the reasoning of others.
- MP4: Model with mathematics.
- MP5: Use appropriate tools strategically.
- MP6: Attend to precision.
- MP7: Look for and make use of structure.
- MP8: Look for and express regularity in repeated reasoning.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- **TI1(9-12)**: I can implement a realistic plan and adapt when necessary to achieve my goals.
- **TCC3(9-12)**: I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that…	**Essential Questions:**
• Algebra consists of numbers, variables, operations, and rules for relationships between those entities. • A variable represents an unknown quantity. • Real-life situations can be modeled algebraically. • Solving an equation means finding the value(s) for the variable that makes the equation true. • To obtain a solution, one must utilize *inverse operations* to reverse mathematical processes in a systematic sequence, ensuring the equality remains balanced.	• What does it mean to simplify an expression completely? • What is the difference between simplifying an expression and solving an equation? • What methods or strategies do you use to decide how to solve a problem? How does this extend to the validity of a solution to a problem? • Does each equation have a distinct solution and how do you know? • How can equations be used to model information?
Students will know…	**Students will be able to…**

• Expressions and equations can be used to model real world situations. • Simplifying an algebraic expression is an extension of using order of operations to simplify a numerical expression. • Inverse operations are used to solve linear equations. • Linear equations can have one, none, or infinitely many solutions.	• Perform arithmetic on integers. • Simplify numerical expressions using order of operations. • Evaluate expressions. • Write expressions to represent real world situations. • Solve one and two step equations, including application problems. • Simplify expressions completely, using combining like terms and/or distributive property • Solve multi-step equations, including those with variables on both sides. • Write equations to model and solve real world situations. • Identify when an equation has one solution, no solution, or infinitely many solutions.
Key Vocabulary: Coefficient, Combine Like Terms, Constant, Difference, Distributive Property, Expression, Equation, Equality, Infinite Solutions, Interpret, Inverse Operation, Justify, Like Terms, Modeling, No Solution, Order of Operations, PEMDAS, Persevere, Product, Properties of Equality, Quotient, Simplify, Solve, Solution, Sum, Term, Variable	
Assessment Evidence	
Performance Tasks: Summative Assessment - Unit 2 test **TCC3(9-12)** • Evaluate expressions • Simplify expressions completely • Solve 1 step, 2 step, and multi step equations, including variables on both sides • Solve application problems by writing and solving linear equations	**Other Evidence:** Quiz 2-1 - solving 1 step equations, evaluating expressions, writing expressions for real world situations Quiz 2-2 - solving 2 step equations, including application problems Quiz 2-3 - simplifying expressions by combining like terms and/or distributive property Quiz 2-4 - solving 2 step equations which require combining like terms and/or distributive property New Year's Matholution - At the start of the new year, students reflect on their progress and set a goal for the rest of the school year. **TI1(9-12)**

Learning Plan
This unit starts with an informal exploration of equation solving and equality through picture puzzles. Students review order of operations and negative numbers. They learn several strategies for adding and subtracting integers (counters and number lines), then move on to multiplying and dividing integers. They learn about variables, evaluating expressions, and writing simple expressions to represent real world situations. Quiz 2-1 assesses these topics. The second topic in this unit is solving 2-step equations, including application problems. Students are encouraged to write equations to solve problems, as this will be beneficial as the situations become more complex. Quiz 2-2 assesses these topics. Next students learn to simplify expressions by combining like terms and/or using the distributive property. Quiz 2-3 assesses these topics. The fourth topic involves solving equations which become 2 step equations after one side is simplified by combining like terms and/or using the distributive property. Quiz 2-4 assesses this. Finally students solve multi-step equations, including application problems. The unit 2 test assesses students on all of these topics, which are important foundational topics as they begin their study of algebra. **TCC3(9-12)** After the test, students study special cases of linear equations; equations which have either no solution or infinitely many solutions. During the first class after winter break, students are asked to reflect on their habits and progress in the first part of this course, and they write a “New Year’s Matholution” which is hung up in the classroom to help them through the rest of the school year. **TI1(9-12)**
Teacher Resources: IM Algebra 1 Unit 2: Linear Equations, Inequalities, and Systems; State of CT Algebra 1 Model Curriculum Unit 2; Amplify Desmos; IXL; Khan academy; teacher created worksheets and assessments; interactive notebook pages; Socrative; Blooket; Quizizz; Kahoot

Unit 3 - Linear Functions

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards (* indicates a modeling standard. For standards that encompass several different topics/concepts, the bolded part is the focus for this unit. If no bolding, the entire standard pertains to this unit.)

- **F.IF.A.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.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.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.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.**
- **A.CED.A.2** Create equations that describe numbers or relationships. **Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.**
- **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).
- **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 technology for more complicated cases.*
    - **F.IF.C.7.A Graph linear** and quadratic **functions and show intercepts**, maxima, and minima.
- **F.BF.A.1** Write a function that describes two quantities.
- **F.IF.C.8** Write a function defined by an expression in different by equivalent forms to reveal and explain different properties of the function.
- **F.LE.A.2 Construct linear** and exponential **functions, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).**

Standards for Mathematical Practice

- MP1: Make sense of problems and persevere in solving them.
- MP2: Reason abstractly and quantitatively.

- MP3: Construct viable arguments and critique the reasoning of others.
- MP4: Model with mathematics.
- MP5: Use appropriate tools strategically.
- MP6: Attend to precision.
- MP7: Look for and make use of structure.
- MP8: Look for and express regularity in repeated reasoning.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- **TCC2(9-12)**: I can evaluate evidence from multiple perspectives, and recognize their limitations and implications, in order to justify new conclusions.
- **TCC3(9-12)**: I can integrate relevant information to produce multiple valid solutions.

Understandings: Students will understand that...

- A function maps each input (domain) to exactly one output (range), and is often expressed as f(x).
- Function notation helps evaluate and interpret functions in different contexts, connecting mathematical expressions to real-world situations.
- Understanding the different representations of functions - verbal, graphical, using tables, and algebraic - allows us to model real-world situations, identify relationships, make predictions, and solve problems effectively. Different representations provide unique insight into the behavior and characteristics of functions.
- Linear functions describe relationships and quantities with a constant additive rate of change, known as the slope.
- Equations represent relationships between quantities and can be graphed on a coordinate plane.
- The graph of a linear function (a line) represents a set of infinite solutions to a two variable equation.
- The average rate of change describes how a function's output changes over an interval.
- Graphs of functions reveal key features like intercepts and slope.

Essential Questions:

- How do we distinguish between relations and functions?
- What is a function, and how can we represent it using equations, graphs, and tables?
- How do we use function notation to evaluate and interpret functions?
- How can mathematical functions be used to represent, analyze, and solve real-world problems, and what insights do different forms of representation provide?
- How can understanding linear functions and their multiple representations help us model real-world situations, interpret relationships, and problem solve effectively?
- What is a linear function, and how can it be represented using equations, graphs, and tables?
- What is the significance of a linear function's slope and y-intercept in the context of modeling linear applications?
- How do changes in the form of a linear equation affect its graph and the relationship between variables?

Students will know...	Students will be able to...
• Functions are relations with each element domain paired with exactly one element of the range. • Function notation is another way to represent your dependent variable. • Functions can be represented by tables, equations, graphs and mapping diagrams. • Domain is the set of all x-values and range is the set of all y-values in a relation. • Linear functions do not include exponents, variables in the denominator, or variables under radicals. • Linear functions can be identified from equations, graphs, and tables. • Slope is a constant rate of change that can be calculated from a graph, table, equation, or two points. • The y-intercept is often referred to as the initial value. It can be identified from an equation or from a graph. • The x-intercept is often referred to as the zero of the function - when the value of the function is zero. • Linear functions can be built from graphs, descriptions, or input-output pairs.	• Understand that a function is a relationship where each input (domain element) has exactly one output (range element). • Represent relations in tables, graphs, equations and mapping diagrams. • Identify the domain (set of possible inputs) and range (set of possible outputs) from a graph, mapping diagram, or table. • Use function notation to represent functions and evaluate them for given inputs. • Solve for the input given an output of a function from an equation. • Interpret and plot functions on a coordinate plane, recognizing how graphs represent the function's behavior. • Interpret graphs to find key features in a scenario. • Use functions and function notation to describe contextual situations. • Identify and classify linear functions from graphs, tables, and equations. • Calculate the slope of a line from a graph, table, equation, and/or two points. • Interpret the meaning of intercepts given a situation, equation, or graph. • Graph linear functions using slope-intercept form. • Graph linear functions in standard form by rewriting into slope-intercept form or by finding the intercepts. • Write equations of linear functions given a graph or a context. • Analyze and interpret the slope and intercepts of a linear function in real-world situations.

Key Vocabulary: Ordered pair, Coordinate Plane, Quadrant, Axis, Relation, Function, Mapping Diagram, Graph, Table, Domain, Range, Independent Variable, Dependent Variable, Function Notation, Linear Function, Slope, Constant Rate of Change, Y-intercept, X-intercept, Slope-Intercept Form, Standard Form, Origin, Solution

Assessment Evidence	
Performance Tasks: Summative Assessment - Unit 3 test **TCC3(9-12)** ● Determine if a relation is a function ● Domain and range ● Function notation ● Linear vs non-linear ● Identify slope from equation, graph, and table of values ● Sketch graph of linear function ● Write equation of line from graph and from problem situation ● Interpret real world meaning of slope and intercepts from graph of problem situation	**Other Evidence:** Concept check 3.1 - plotting points, identifying quadrants Quiz 3-1 - function vs non; identify domain and range from mapping diagram and table of values Quiz 3-2 - function notation; independent vs dependent variable Concept check 3.2 - slope of a graph Quiz 3-3 - slope from a graph and from a table of values; linear vs non linear **TCC2(9-12)** Quiz 3-4 - identify slope and y-intercept and graph line from slope-intercept form; rewrite equations into slope-intercept form; write equation of line given slope and y-intercept Quiz 3-5 - identify slope, x-intercept, and y-intercept from graph; write equation given graph; graph by finding intercepts; interpret real world meaning of intercepts from problem situation **TCC2(9-12)**

Learning Plan
The unit begins with a review of plotting points on the coordinate plane, which is assessed with a concept check. Then students learn about relations and functions, including identifying functions from mapping diagrams, tables of values, graphs, and situations. Students learn about domain and range, and identify domain and range from mapping diagrams and from tables of values. Quiz 3-1 assesses these topics.Next students learn about function notation and independent vs dependent variables. This is assessed through Quiz 3-2. Next students learn about slope and how to calculate slope from a graph of a line, as well as from a table of values. Students decide if a table of values represents a linear or non-linear function. Quiz 3-3 assesses students on these skills. The next topic of study is the slope-intercept form of a linear equation. Students learn to graph a line that is in slope-intercept form and to rewrite an equation into slope-intercept form. Students also study the real world meaning of the slope and the y-intercept in a problem situation. Quiz 3-4 assesses these topics.

Students then learn about intercepts and how to graph a line that is in standard form by finding the intercepts. Students learn about the real world meaning of the x-intercept and the y-intercept in a problem situation. Quiz 3-5 assesses these topics. Finally students practice writing the equations of lines from graphs and from problem situations. The unit 3 test assesses all of the topics from this unit.
Teacher Resources: IM Algebra 1 Unit 4: Functions; IM Algebra 1 Unit 2: Linear Equations, Inequalities, and Systems; State of CT Algebra 1 Model Curriculum Unit 2; Amplify Desmos; IXL; Khan academy; teacher created worksheets and assessments; interactive notebook pages; Socrative; Blooket; Quizizz; Kahoot

Unit 4 - Linear Inequalities in One and Two Variables

Desired Results - Goals, Transfer, Meaning, Acquisition

Established Goals:

Common Core State Standards (* indicates a modeling standard. For standards that encompass several different topics/concepts, the bolded part is the focus for this unit. If no bolding, the entire standard pertains to this unit.)

- **A.CED.A.1 Create** equations and **inequalities in one variable and use them to solve problems.** *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*
- **A.CED.A.3 Represent constraints by equations on inequalities,** and by systems of equations and/or inequalities, and **interpret solutions as viable or nonviable options in a modeling context**.
- **A.REI.B.3 Solve linear** equations and **inequalities in one variable**, including equations with coefficients represented by letters.
- **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.

Standards for Mathematical Practice

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- MP2: Reason abstractly and quantitatively.
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- MP4: Model with mathematics.
- MP5: Use appropriate tools strategically.
- MP6: Attend to precision.
- MP7: Look for and make use of structure.
- MP8: Look for and express regularity in repeated reasoning.

Vision of A Learner Attributes: Students will be able to independently use their learning to... ("I can" statements to be demonstrated)

- **P4(9-12)**: I can take-on challenges and continuously engage in my own long-term strategies to overcome them to demonstrate through personal experience that failures are more instructive than discouraging.

Understandings: Students will understand that...

- Inequalities express a range of possible solutions, rather than a single answer.
- The properties of equality and inverse operations are used to solve inequalities in one-variable.

Essential Questions:

- How can inequalities be used to model information?
- How do inequality properties compare to those of equations?
- What characteristics drive using an inequality instead of an equation?
- What is a solution set for a linear inequality?

• The solutions to a linear inequality in two-variables lie in a half-plane, the region of the coordinate plane that contains all of the ordered pairs that satisfy the inequality.	
Students will know... • Inequalities are solved using inverse operations. • If you multiply or divide each side of an inequality by a negative number, the direction of the inequality sign is reversed. • The solutions to a linear inequality in one-variable are graphed on a number line. • A linear inequality in two-variables divides the coordinate plane into two half-planes. One side of the boundary line will represent solutions and is shaded to show this.	**Students will be able to...** • Solve and graph multi-step inequalities in one-variable. • Model real-world situations using inequalities in both one-variable and two-variables. • Graph linear inequalities in two-variables.
Key Vocabulary: Inequality, Greater Than, Less Than, At Least, No More Than, Solution, Solution Set, Dashed Line, Solid Line, Flip the Inequality Sign	
Assessment Evidence	
Performance Tasks: Donut problem - students investigate linear inequalities through this real world situation. **P4(9-12)**	**Other Evidence:** Quiz 4-1 - writing and graphing inequalities for real world situations; solving and graphing linear inequalities, including real world situations Quiz 4-2 - graphing linear inequalities in two-variables, including rewriting to identify the slope and y-intercept
Learning Plan	
This unit builds off of the previous 2 units, but now our understanding of linear equations in one- and two-variables is extended to linear inequalities in one- and two-variables. We start with an exploration of inequalities in the real world, such as “you must be at least 18 to vote”. Then we move to solving linear inequalities in one-variable and representing the solutions on a number line. This includes real world problems. Students are assessed on this topic with quiz 4-1. Students are introduced to linear inequalities in two-variables through the donut problem. **P4(9-12)** Students graph linear inequalities in two-variables, including rewriting inequalities to identify the slope and y-intercept. Students are assessed on this topic with quiz 4-2.	

The final exam is cumulative and follows unit 4.
Teacher Resources: IM Algebra 1 Unit 4: Functions; IM Algebra 1 Unit 2: Linear Equations, Inequalities, and Systems; State of CT Algebra 1 Model Curriculum Unit 2; Amplify Desmos; IXL; Khan academy; teacher created worksheets and assessments; interactive notebook pages; Socrative; Blooket; Quizizz; Kahoot