

## Spaulding High School

---

**Course Title: Honors Algebra 1 (Google Classroom: Irbk5zp)**

**Department: Mathematics**

**Teacher Contact Information:** Mary Gaudreau, 476 4811 ex.2108, mgaudshs@buusd.org

**Department Chair Contact Information:** Erin Carter, ecartshs@buusd.org

### **Course Description:**

This is a one semester course that develops algebraic concepts in rapid succession using explorations and technology. A potential honors student should be able to skillfully handle the arithmetic of whole numbers, fractions, decimals, and percents without a calculator (before entering the course). Students need to have a high degree of motivation. They also must possess the ability to read, listen, think, and communicate their thinking as well as complete the assignments.

### **Topics/Areas of Study/Units of Study:**

- Unit 0: One Variable Data
- Unit 1: Solving Linear and Literal Equations
- Unit 2: Expressions and Linear Equations Containing Two Variables
- Unit 3: Inequalities
- Unit 4: Polynomial Expressions and Radicals
- Unit 5: Quadratic Equations
- Unit 6: Transformations and Functions
- Unit 7: Properties of Exponents and Exponential Equations
- Unit 8: Scattered Two Variable Data, Probability, and Combinations
- Unit 9: Recursive and Explicit Formulas
- Unit 10: Inverse Variation Graphs and Equations

### **Materials/Text(s):**

- Holt McDougal Algebra 1
- Pencils
- TI-83+ Calculator or better
- Lined paper
- Graph paper
- Ruler
- 2 ½ or larger in binder

### **Practice:**

During class you should expect warm-up tasks, investigations, and practice handouts. You will be expected to share your work for your tablemates and class as a whole. You will also be given practice from the book nightly that I will collect daily. These assignments will take about 20-45 minutes and allow you to test yourself on whether you understood that day's content. These assignments may also be used to determine your accountability score for Habits of Work (if we are reporting those this year). To earn a "4", homework must be turned in complete by the day of the unit assessment. Assignments cannot be turned in after the day of the test to increase your accountability grade.

### **Assessment/Reassessment:**

During each unit you will have formative assessments and a summative assessment. The formative assessments are the quizzes, exit cards, and questioning in class. Quizzes are a chance to give you feedback on what you understand and what you have yet to understand, so no score will be provided because the intent is to give feedback not do the final assessment. Each unit (except unit 0) will have a test at the end where you will be expected to demonstrate the skills you have learned over the unit. You will be allowed a notecard of notes for each test. After the summative assessments happens, You will be able to reassess Performance Indicators if you

would like to improve your score. To qualify for a reassessment I expect you to turn in all homework related to that Performance Indicator adequately completed and do test corrections on the standard you wish to reassess.

**Safety protocols (these may change over the course of the year):**

- Masks must be worn over your nose and mouth while you're indoors

**Expectations (These may alter as appropriate):**

- Student Expectations [LINK](#)
- Cell phones should not be out during class. They should be on silent and in your pocket or bag.
- Bring your chromebook to class. We will be using it to supplement learning.
- You should be regularly checking the classroom. I will be posting assignments and lessons there.

**List of Assessed Course Standards:**

Creating Equations and Inequalities

Solving Equations and Inequalities

Graphing

Multiple Representations

Statistics

Modeling

Key for attached standards:

**No \* = Exemplary Level**

**\* = Needed to earn proficient in that standard**

**\*\* = Required to earn credit**

**To receive credit for the course students must have met a majority of the standards (4/6) and have earned proficient or better on all of the required standards.**

Honors Algebra 1 Standards Checklist 21-22 (Semester 1)

Standards	Code	Performance Indicators	Proficiency	
<b>A. Creating Equations and Inequalities</b>	**1.	Create equations for linear relationships		
	**2.	Create inequalities in one variable		
	*3.	Recognize exponential growth and write equations to represent pattern		
	*4.	Build new functions from existing functions (transformations)		
	*5.	Create inverse variation equations		
	**6.	Create quadratic equations in two variables (Vertex, factored and standard form)		
	*7.	Create equations for lines of fit		
	8.	Create linear equations in point slope, intercept and standard form <b>and</b> recognize the most efficient form given the context		
	9.	Create inequalities in two variables		
	10.	Recognize and give growth and decay rates as a percentage		
	11.	Create arithmetic and geometric recursive formulas in function notation		
<b>B. ★ Solving Equations/Inequalities</b>	**1.	Solve 1-variable linear equations, with at least 2 steps, and justify your reasoning		
	**2.	Correctly solve a system of 2 linear equations using an algebraic method		
	**3.	Solve 1-variable linear inequalities including negative coefficients		
	**4.	Solve quadratic equations algebraically		
	**5.	Solve quadratic equations Quadratic formula		
	6.	Solve 1-variable linear equations with multiple distributions, fractions, and negative numbers		
	7.	Solve multivariable equations for any single variable in any form (Literal Equations) with at least 3 steps.		
	8.	Solve quadratic equations algebraically by all methods (completing square, factoring, vertex form with square roots)		
	9.	Understand how many solutions there are to both linear and quadratic equations		
<b>C. Graphing</b>	**1.	Linear Functions: Graph and describe functions in terms of their features including intercepts, maximums, minimums, increasing/decreasing intervals		
	**2.	Solve systems by graphing		
	*3.	Exponential Functions: Graph and describe functions in terms of their features including intercepts, maximums, minimums, increasing/decreasing intervals, and asymptotes		
	**4.	Quadratic Functions: Graph and describe functions in terms of their features including intercepts, maximums, minimums, increasing/decreasing intervals		

	**5.	Graph transformations of functions		
	*6.	Graph one variable and two variable inequalities		
	7.	Graph and label linear functions in any form		
	8.	Rational Functions: Graph and describe functions in terms of their features including intercepts, maximums, minimums, increasing/decreasing intervals, and asymptotes		
<b>D. Multiple Representations</b>	*1.	Write linear sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms		
	*2.	Write exponential sequences both recursively and with an explicit formula		
	**3.	Factor by Greatest Common Factor		
	*4.	Convert between quadratic forms		
	*5.	Factor Quadratic Expressions with Leading Coefficient 1		
	**6.	Simplify exponential expressions using exponential properties		
	*7.	Write numbers in Scientific Notation		
	8.	Factor Quadratic Expressions With Any Leading Coefficient		
	9.	Properties of Negative Exponents		
	10.	Operations with Scientific Notation		
<b>F. Statistics</b>	*1.	Compare 2 or more data sets using measures of center, spread, and 5-number summaries, to make reasonable observations.		
	*2.	Calculate Permutations and Combinations		
	*3.	Calculate theoretical probability		
	4.	Calculate outliers when comparing data sets		
<b>G. Modeling</b>	*1.	Fit a linear function for a scatter plot that suggests a linear association and derive an equation to make predictions. Explain why the line of fit is appropriate.		
	**2.	Define the elements and boundaries of a relationship's domain and range		
	**3.	Identify a function from a graph or table and create examples of relations and functions		
	**4.	Interpret parts of an expression, such as terms, factors, and coefficients		
	*5.	Interpret systems of inequalities and their graphs and define feasible regions		
	*6.	Explain why a relation is a function or not		
	7.	Create systems of inequalities and their graphs and define feasible regions		

In order to receive credit for Honors Algebra 1, students must be proficient in **A1, A2, A6, B, C1, C2, C4, C5, D3, D6, G2, G3, G4** in addition to be proficient in at least four standards.

## 2021-2022 Overall Course Performance Grading Guideline

COURSE PERFORMANCE RATING	GPA Value	GRADING CRITERIA
Exemplary	4.0	<ul style="list-style-type: none"> <li>● <b>All</b> standards are Exemplary or Proficient, <b>AND</b></li> <li>● <b>Majority</b> of standards are Exemplary</li> </ul>
Partially Exemplary	3.5	<ul style="list-style-type: none"> <li>● <b>All</b> standards are Exemplary or Proficient, with at least one standard being Exemplary</li> </ul>
Proficient	3.0	<ul style="list-style-type: none"> <li>● <b>All</b> standards are Proficient</li> </ul>
Partially Proficient	2.5	<ul style="list-style-type: none"> <li>● <b>All required</b> standards are Exemplary or Proficient, <b>AND</b></li> <li>● <b>Majority</b> of standards are Proficient, <b>AND</b></li> <li>● <b>No</b> standards are Beginning or Insufficient Evidence</li> </ul>
Developing	2.0	<ul style="list-style-type: none"> <li>● <b>Majority</b> of standards are Developing.</li> </ul>
Beginning	1.0	<ul style="list-style-type: none"> <li>● <b>Majority</b> of standards are Beginning.</li> </ul>
Insufficient Evidence	0.0	<ul style="list-style-type: none"> <li>● <b>Majority</b> of the standards are Insufficient Evidence.</li> </ul>

\*Honors and AP courses would add an additional 0.33 to the GPA score.