Spaulding High School
2021-2022 Course Syllabus Required Elements

Course Title: Algebra 1 Part B
Department: Mathematics
Teacher Contact Information: Ryan Dunlea, rdunlshs@buusd.org, 476-4811 x 2101
Department Chair Contact Information: Erin Carter, ecartshs@buusd.org , 476-4811 x 2100

Course Description:

In this course, students examine such topics as exponential growth and decay, transformations and quadratics. The examination of the topics is embedded in real-life situations and applications, and includes investigations where students construct their own understanding of the mathematical concepts. Algebra students will be expected to follow directions and be disciplined to read, listen and think on their own. To be successful, the student must complete daily assignments and be able to work cooperatively in groups as well as independently.

Topics:

Creating Equations and Inequalities, Solving Equations and Inequalities, Graphing, Multiple Representations, Statistics, and Modeling

Unit 7: Exponential Functions (Indicators **A3P**, A9E, **C4P**, **D3P**, **D4P**, **D5P**, D8E, **G4P**, **G5P**)
Unit 8: Transformations (Indicators **A6P**, **C6P**, C10E, D6E)
Unit 9: Rational Functions (Indicators **A4P**, C11E)
Unit 10 Part 1: Quadratics General, Factored, Vertex (Indicators **A5P**, **B4P**, **C5P**)
Unit 10 Part 2: Quadratic Factoring, Completing the Square, Quadratic Formula (Indicators **B5P**, **B6P**, B9E, B10E, D7E)
Unit 11: Probability (Indicators **F3P**, **F4P**, F7E)

Materials:

Graphing Calculator: TI-83 Plus or TI-84
3-Ring Binder (1 ½-2”)
Pencils and erasers
Loose-leaf Paper
Ruler
Composition Book (graph paper if you can find it)
Laptops

Text: None

Practice:

- Classwork and homework are not assessed for proficiency but will help students practice and learn standards for future assessments. The classroom will be a combination of traditional and Vertical Classroom. This means that students will be working in groups of their peers while also having whole class discussions.
- Students are expected to participate in class work, group work, projects, extra practice, and check-ins (mini-quiz). These are not counted towards assessment, but merely as practice to strengthen their abilities.

Assessment/Reassessment:
Students will have multiple opportunities to show proficiency on each standard during "class time." Assessments will be given at the end of each Unit as outlined below.

Additional opportunities are available and may be arranged on a case by case basis outside of class time on WEDNESDAYS. Students will need to correctly complete a Re-assessment Plan and have it completely checked by an instructor before reassessing. Therefore, Reassessment Plans that need to be checked must be turned in by Monday at 3pm to schedule a reassessment for Wednesday.

In order to be eligible for callback day at the end of the semester, students need to be within 3 indicators to come in if the work to reassess has been completed.

Academic Expectations

- Be Respectful. Not being respectful will result in a warning. If it continues, then a write up will follow.
- Bring your chromebook to in person class. We will be using it to supplement learning.
- Cell phones are to remain in pockets or bags throughout class. If there is an emergency, please let me know ahead of time. Otherwise, we will have a cell phone holder.
- If you are going to be absent from class I expect you to go to the google classroom to get the notes and the homework assignment. Please contact me if you're confused about the material and we can set up advisory time to work together.
- Every student is expected to make mistakes, but to succeed, students must learn from them.
- If you are interested in exploring a different way of doing something, feel free to try it and let me know about it! We are always open to finding new and interesting ways to work together and create activities.
- Students are expected to work with peers and teachers within the class respectfully and productively.
- If you find you're struggling with the content, I expect you to reach out to me so I can either arrange a time for us to talk or arrange some tutorial times for you with Mr. Willis in Tide Pool.
- Cheating could result in inability to earn Exemplary in the class.

Students/Parents/Guardians: Please accept the google classroom invite as a guardian to see weekly updates, assignments, and acknowledge you have read this syllabus.

Spaulding High School

2021-2022 Overall Course Performance Grading Guideline

COURSE PERFORMANCE RATING	GPA Value	GRADING CRITERIA
Exemplary	4.0	● **All** standards are Exemplary or Proficient, **AND** ● **Majority** of standards are Exemplary
Partially Exemplary	3.5	● **All** standards are Exemplary or Proficient, with at least one standard being Exemplary
Proficient	3.0	● **All** standards are Proficient
Partially Proficient	2.5	● **All required** standards are Exemplary or Proficient, **AND** ● **Majority** of standards are Proficient, **AND** ● **No** standards are Beginning or Insufficient Evidence
Developing	2.0	● **Majority** of standards are Developing.
Beginning	1.0	● **Majority** of standards are Beginning.
Insufficient Evidence	0.0	● **Majority** of the standards are Insufficient Evidence.

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

List of Assessed Course Standards: see below

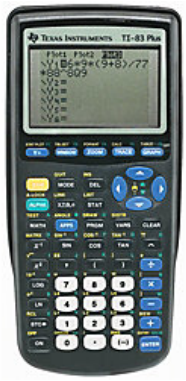
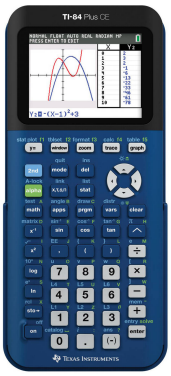
Algebra 1(b) Standards Checklist 21-22

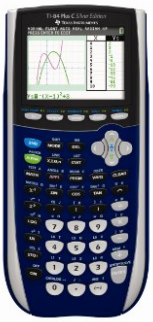
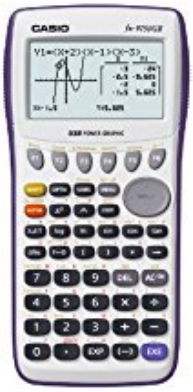
Standards	Code	Performance Indicators	Proficiency
A. ★ Creating Equations and Inequalities	3P	Create exponential equations	
	4P	Create inverse variation equations and transformations	
	5P	Create quadratic equations in vertex, factored and standard form	
	6P	Build new functions from existing functions (transformations)	
	9E	Use both growth/decay factor and percent rate	
B. ★ Solving Equations/ Inequalities	4P	Solve quadratic equations algebraically in vertex form	
	5P	Solve quadratic equations by Factoring that have a leading coefficient of one	
	6P	Solve quadratic equations using Quadratic formula	
	9E	Solve quadratic equations by completing the square	
	10E	Use the discriminant to explain the number of solutions	
C. ★ Graphing	4P	Exponential Functions: Graph and describe functions in terms of their features including intercepts, maximums, minimums, increasing/decreasing intervals, and asymptotes	
	5P	Quadratic Functions: Sketch and describe functions in terms of their features including intercepts, maximums, minimums, increasing/decreasing intervals	
	6P	Graph transformed familiar parent functions including Translation and Reflection	
	10E	Graph transformed familiar parent functions including Vertical Stretch	
	11E	Rational Functions: Graph and describe functions in terms of their features including reflections and asymptotes	
D. ★ Multiple Representations	3P	Write exponential sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms	
	4P	Apply properties of exponents	
	5P	Scientific Notation	
	6E	Predict the effect of equation changes even on unfamiliar equations, including explanation.	
	7E	Convert between quadratic forms as necessary to graph, interpret, or solve problems	
	8E	Apply properties of integer exponents with negative exponents.	
F. ★ Statistics	3P	Calculate and compare experimental probability with theoretical probability.	
	4P	Use counting methods including permutations and combinations to compute probabilities of compound events and solve problems.	
	7E	Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.	
G. ★ Modeling	4P	Fit an exponential function to a scatter plot and derive an equation to make predictions.	
	5P	Interpret parts of an expression/equation, such as terms, factors, and coefficients	

In order to receive credit for Algebra 1 Part B, students must be proficient in all 6 standards (indicated by a ★). Indicators that include a P are all required for Proficiency in that standard.
Indicators that include an E are all required for Exemplary in that standard.

Choosing Your Calculator

These calculators will be used all 4 years of high school (and college), so choosing the right tool and keeping it in good condition is important.

<table>
<tr><td>Good Choices:</td><td> 
TI-83 Plus
The basic workhorse for a reason. Getting the job done for 20 years.
$75-$100</td><td> 
TI-84 Plus
Not much different from the 83 Plus. A little faster, but essentially the same.
$70-$110</td><td> 
TI-84 Plus CE
Rechargeable batteries
Different colors on graphs
Better picture quality
Super thin
<u>Requires charging by cable</u>!
$99-$150</td></tr>
<tr><td>Poor Choices:</td><td>Beware: students would have to teach themselves to use it.

Otherwise, a good calculator.
 
TI-Nspire CX
Rechargeable batteries
Picture quality colors
<u>Requires charging by cable</u>!
$125-$150</td><td>Beware: This one has had some charger/battery issues in the past couple years, so I don’t recommend it...plus it’s more expensive...
 
TI-84 Plus C Silver Edition
$112</td><td>Beware: Others
You can purchase Casios but beware that students would have to teach themselves to use it.
  </td></tr>
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If purchasing a calculator presents a financial hardship, there will be scholarship forms available in August. *Please be sure you have free lunch forms filled out prior to applying for a scholarship calculator*.

Scholarship Calculator Request Form

The Spaulding math department can provide some graphing calculators for students who qualify for free or reduced lunch (this also means the lunch forms must be filled out and returned to school). These funds are limited, and will be distributed on a first come - first serve basis.

Please return this form to Assistant Math Department Chair: Ms. Coleman

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Student Name: _____

Teacher Name: _____

Date Requested: _____

I hereby authorize Spaulding High School to release the Free & Reduced Lunch status for my child to Elisha Coleman, the assistant math department chair, for the sole purpose of determining eligibility in receiving a scholarship calculator.

Parent Signature: _____

For Office Use Only

Math Department Chair: _____

Student has been determined eligible _____

Student has been determined NOT eligible _____

For Math Department Use

Calculator Number Assigned: _____

Date Assigned: _____