

## Syllabus

**ALGEBRA 1 ACCELERATED**

**Teacher Contact Information:** Dr. Amy Cook  
[amy.cook@somersetnv.org](mailto:amy.cook@somersetnv.org) Room 403

[www.drcookmath.weebly.com](http://www.drcookmath.weebly.com)

**I. COURSE DESCRIPTION**

This one-year course is designed to provide students with the necessary knowledge and skills to be prepared for further studies in mathematics. It is intended to increase mathematical fluency in problem solving, logic, reasoning, and effective communication in the study of patterns, functions, and algebra. This course builds on the concepts of rational and irrational numbers, data analysis, probability, geometry, measurement, spatial relationships, patterns, and algebraic concepts. Instructional practices incorporate integration of diversity awareness including appreciation of all cultures and their important contributions to society. The use of technology, including calculators and computer software, is an integral part of this course. This course will fulfill the algebra requirement for and one of the mathematics credits required for high school graduation.

**II. COURSE GOALS**

1. To develop the Standards for Mathematical Practice. [CCSS]
2. To extend the properties of exponents to rational exponents and use properties of rational and irrational numbers. [CCSS: N.RN]
3. To reason quantitatively and use units to solve problems. [CCSS: N.Q]
4. To interpret the structure of expressions and write expressions in equivalent forms to solve problems. [CCSS: 8.EE\*; A.SSE]
5. To perform arithmetic operations on polynomials. [CCSS: A.APR]
6. To create equations that describe numbers or relationships. [CCSS: A.CED]
7. To understand solving equations is a process of reasoning and explain the reasoning; solving equations and inequalities in one variable; solve systems of equations; and represent and solve equations and inequalities graphically. [CCSS: 8.EE\*; A.REI]
8. To understand the concept of a function and use function notation; interpret functions that arise in applications in terms of the context; and analyze functions using different representations. [CCSS: 8.F\*; F.IF]
9. To build a function that models a relationship between two quantities; and build new functions from existing functions. [CCSS: 8.F\*; F.BF]
10. To construct and compare linear, quadratic, and exponential models and solve problems; and interpret expressions for functions in terms of the situation they model. [CCSS: F.LE]
11. To summarize, represent, and interpret data on a single count or measurement variable; summarize, represent, and interpret data on two categorical and quantitative variables; and interpret linear models. [CCSS: S.ID]
12. To investigate patterns of association in bivariate data. [CCSS: 8.SP\*]
13. To understand congruence and similarity using physical models, transparencies, or geometry software. [CCSS: 8.G\*]

### III. REQUIRED MATERIALS

- Two composition notebooks for Interactive Notebooks, 1 per semester (college ruled)
- Scissors, glue stick, and colored pencils or colored markers (fine point) – for Interactive Notebooks & personal use
- Pencil, eraser, and highlighter

### IV. COURSE STRUCTURE (subject to change without notice)

#### CONTENT TOPICS

##### First Quarter

- One Variable Data Distribution
- Bivariate Categorical Data
- Relationships between Quantities
- Expressions
- Equations in One Variable
- Linear Inequalities
- Absolute Value Equations and Inequalities

##### Second Quarter

- Graphing Relationships
- Functions and Models
- Arithmetic Sequences
- Graphing Linear Functions
- Create Linear Functions
- Modeling Linear Functions

##### Third Quarter

- Systems of Linear Equations
- Systems of Linear Inequalities
- Rational Exponents
- Geometric Sequences
- Graphing Exponential Functions
- Create and Model Exponential Functions
- Solve Exponential Functions
- Compare Linear and Exponential Functions

##### Fourth Quarter

- Polynomials and Factoring
- Graphing Quadratic Functions
- Solving Quadratic Functions
- Inverse Functions
- Piecewise Functions

### V. STANDARDS OF EVALUATION

- **Practice**
  - All written notes are to be done in notebooks. All assignments must be done in the notebooks unless otherwise instructed. Assignments will be uploaded to the student's Showbie account and graded. These assignments should be done neatly. Please refer to Math Notebook Guidelines.
  - Practice is a great opportunity to prepare yourself for the formative and summative assessments.
  - Work given IN CLASS and allowed to be finished at home will be counted as a formative assessment which is worth 40% of your quarter grade.
    - E-text/online book can be found on [www.drcookmath.weebly.com](http://www.drcookmath.weebly.com).
- **Learning Teams**
  - Students will be randomly placed in groups of 3-4 to form a Learning Team.

- Learning Teams will be kept together for one semester and will change.
- **Projects**
  - Projects will occur one per quarter and will be done individually or in Learning Teams.
  - There will be project check-points throughout the duration of a project that will be worth 40% of your quarter grade. The final project will count towards 60% of your grade.
- **Quizzes**
  - Quizzes are given periodically (with or without notice) and are administered for the purpose of indicating to the student areas that need to be studied and to indicate what objectives have been mastered.
  - Retakes will not be given on quizzes.
  - Quizzes are worth 40% of the quarter grade.
- **Tests**
  - Expect a test at the end of every unit.
  - A review will be given a day before the test. Students will be expected to take the test if he/she is absent on the day of the review.
  - Retakes will not be permitted. All students have the opportunity for test corrections.
    - Test corrections are due one week after the test has been passed back to students. Dr. Cook will specify the due date in class.
      - ✓ Test scores will be final after the deadline and cannot be made up.
    - Test corrections must only be completed after school, Monday through Friday until 3:30 p.m.
    - Students can earn half of the points they have lost to improve their grades.
      - ✓ **Students must follow test correction guidelines to earn those points.**
  - Math notebooks will not be allowed on any test. Notebooks should be used to study for the test.
  - Tests are worth 60% of the quarter grade.
- **Tardiness, Make-up Work, and Late Work**
  - Tardiness: A student is considered tardy when the student is not in the classroom when the tardy bell rings. Attendance will be taken at the start of every period. All tardies are unexcused unless the student has a written pass from a school official. Students late 30 minutes or more will be marked absent for that period.
    - Three tardies in a quarter will result in an in-class detention that must be done after school. On the 4<sup>th</sup> tardy, it will be an automatic citation to administration.
  - Missing or Late Work beyond the teacher's deadline may be submitted and graded if done so within the instructional unit in which it was assigned. Make-up work is on the responsibility of the student. He or she must get the missing work once they return.

- Missing work must be turned in before or on the day of a unit test. No missing work will be accepted after the unit test has been administered and graded.
- The quarter grade is weighted as indicated below.
  - Unit Tests and Final Projects ..... 60%
  - Quizzes/ Check-points of Projects/.... 40%
  - Math Application Problems Presentations
  - Classwork/Note Book Checks
- There is no extra credit.
- Grades will be updated by Friday afternoon of each week.

### Semester Weights:

Quarter 1	45%	Quarter 3	45%
Quarter 2	45%	Quarter 4	45%
Semester 1 Exams	10%	Semester 2 Exams	10%

- **Academic Dishonesty**
  - Academic dishonesty will not be tolerated. If a student is caught cheating on any assignment, a zero will automatically be given. During a test or a quiz, talking is considered cheating and the grade will result in a zero and cannot be made up. Students caught cheating may also be referred to administration for additional consequences.

## VI. CLASSROOM EXPECTATIONS AND PROCEDURES

### *Classroom Expectations:*

- Treat people and property with respect at all times.
- Come to class ready to learn by having an open mind and a good attitude.
- Be responsible for your work.
- Bring supplies and homework every day.
- Be in your assigned seat and ready to work when the tardy bell rings/start of class time.

### *Classroom Procedures:*

Each class lesson consists of taking notes, practicing new skills, participating in class activities, and correcting homework. A typical day includes:

1. Quietly sit in your assigned seat and take out required materials.
  2. Begin instructions from the agenda on the board (warm-up activity).
  3. Lesson instruction and work time.
  4. Update Table of Contents in notebook and clean-up work area.
- I dismiss class, not necessarily the bell.
  - No food in class. No vending machine purchases during class time.
  - Restroom usage will be limited during class time. Use the restroom before or after class. If you need to go, raise your hand and let Dr. Cook know.

- Talking during class will not be tolerated except during group activities and classwork time.
- Students should feel free to come in for extra help after school.
- No cell phones, iPods, etc. unless notified otherwise.

## VII. DISCIPLINE POLICY

- First Offense: Verbal Warning
- Second Offense: Name on the board, Detention, & Parent/Guardian contact
- Third Offense: Citation, referral to the counselor

### Policy for Electronic Devices:

**Students must have their cell phones locked in their Yondr pouches. Students will be allowed to use their cell phones ONLY when instructed by Dr. Cook. If a student is caught with his/her cell phone or electronic device, it will be automatically confiscated and progressive discipline will be issued.**

Mobile phones can be disruptive in the classroom in a number of ways and their use should not be abused. Ringtones must be turned off in class, in silent mode, or in airplane mode.

Technology use in the classroom is intended to enhance the learning environment for all students. Dr. Cook will decide when, if, and what type of technology is to be used during class. Any use of technology that degrades the learning environment, promotes dishonesty or is used for illegal activities may be prohibited

## VIII. ADDITIONAL INFORMATION

- I am available for additional help after school Mondays, Tuesdays, and Thursdays only, from 2:30 p.m. to 3:30 p.m. Come prepared with questions; do not expect to be re-taught the lesson.
- Teacher website: [www.drcookmath.weebly.com](http://www.drcookmath.weebly.com)
- Teacher school email: amy.cook@somersetnv.org