Algebra I Course Syllabus

Course Title: Algebra I
Instructor: Alexandra Hatfield (“Aly”)
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Office Hours: Fridays 10:00 AM - 12:00 PM
Communication Expectations: Please feel free to reach out via email for any questions or concerns. I will respond within 24 hours during the school week.

Course Overview

Welcome to Algebra 1! This course is specifically designed for adult learners (ages 21+) who are completing their high school credit requirement. This course is **16 weeks** in length. The first 8 weeks of the course will be 'Part A', and the last 8 weeks will be 'Part B.' There will be an **SOL Exam** at the end of this class!

Each class will begin with a warm-up or topic overview to introduce the day’s concepts. This will be followed by guided notes and example problems that we will complete together as a class. Students will then have dedicated time to work independently or in small groups on practice problems, allowing for hands-on problem-solving and targeted skill development.

Our focus is on building understanding through clear explanations, gaining math confidence, hands-on problem-solving, and targeted practice to prepare for success and application in the real world. Another important part of this class is preparing you to pass the VA SOL State Exam.

Materials Needed

To ensure your success in this course, please come prepared with the following materials:

- Notebook or binder with paper for notes and practice problems
- Pencils and erasers
- Ruler and protractor
- Calculator
- Access to a laptop

If you do not have these supplies, please let us know so we can assist you in acquiring them!

Units & Topics Covered

All units and topics in this course are directly aligned with the Virginia Standards of Learning (SOL) for Algebra I, ensuring a comprehensive and relevant curriculum.

- **Unit 1: Algebraic Expressions & Evaluation:** Understanding variables, expressions, and order of operations.
- **Unit 2: Polynomial Operations:** Adding, subtracting, and multiplying polynomials.
- **Unit 3: Factoring Polynomials:** Techniques for factoring various types of polynomials.
- **Unit 4: Polynomial Division & Quadratic Forms:** Dividing polynomials and recognizing quadratic forms.
- **Unit 5: Radical Expressions:** Simplifying and operating with square roots and other radicals.
- **Unit 6: Linear Equations & Literal Equations:** Solving one-step, multi-step, and literal equations.

Unit 6 is the end of Part A; Unit 7 is the start of Part B

- **Unit 7: Linear Inequalities:** Solving and graphing linear inequalities.
- **Unit 8: Systems of Equations:** Solving systems of linear equations using graphing, substitution, and elimination.
- **Unit 9: Systems of Inequalities:** Graphing and solving systems of linear inequalities.
- **Unit 10: Linear Functions:** Understanding slope, intercepts, and different forms of linear functions.
- **Unit 11: Function Types & Comparisons:** Differentiating between various types of functions and comparing their characteristics.
- **Unit 12: Quadratic Functions:** Graphing parabolas, identifying key features, and solving quadratic equations.
- **Unit 13: Exponential Functions:** Understanding exponential growth and decay and their applications.
- **Unit 14: Bivariate Data & Statistics:** Analyzing relationships between two variables and introductory statistical concepts.

Grading Policy

Your final grade in this course will be calculated based on the following breakdown:

- **Guided Notes: 30%**
- **In Class Problem Practice: 30%**
- **Quizzes & Tests: 20%**
- **SOL Practice Exams: 20%**

Grade Scale:

- A: 90-100%
- B: 80-90%
- C: 70-80%
- D: 60-70%
- F: 50-60%

Classroom Expectations

To foster a positive and productive learning environment, all students are expected to:

1. **Be respectful:** To yourself, your peers, and the learning environment.
2. **Come prepared:** Bring all required materials and be ready to engage with the day's lesson.
3. **Follow directions:** For all activities, assignments, and assessments.
4. **Stay engaged:** Participate actively in lessons and dedicated practice time.
5. **Use technology appropriately:** Laptops and other devices should only be used for class-related work.
6. **Try your best:** Don't be afraid to ask for help and utilize the support systems available to you.

Late Work and Makeup Policy

- **Late Work:** Late assignments will be accepted within one week of the original due date for partial credit (up to 90%).
- **Absences:** If you are absent, it is your responsibility to check with the instructor (via email or in person) for any missed notes, assignments, or materials.
- **Make-up Assessments:** Make-up assignments, tests, and quizzes must be scheduled with the instructor as soon as you return to class.

Support and Accommodations

This class welcomes all learners, and my goal is to help everyone succeed.

- If you have documented accommodations or specific learning needs, please share them with me as soon as possible so we can work together to ensure your success.
- Additional tutoring or one-on-one help is available. Please do not hesitate to talk with me if you feel you need extra support.

Class Resources

Several resources are available to support your learning throughout this course:

- **Class Website:** This is your central hub for all course information. You can find the school schedule and calendar, our weekly class calendar, unit guided notes (interactive notebook), and extra learning resources here.
  - **URL:** mshmath.carrd.co
  - **Synergy:**
- **Desmos Calculator:** A free online graphing calculator that you can use for in-class work and on the SOL tests. Familiarity with Desmos will be a significant asset.
- **Weekly Class Calendar:** This calendar will outline everything we will be doing throughout the week. It has a link to each unit's interactive notebook.
- **Guided Notes:** This is our interactive notebook for each unit. This is our primary form of learning new concepts. We will complete these together as a class. I highly recommend you write down any problems or formulas I work out on the board directly into your notes.
- **Practice Problems:** We will work on these problems together, with partners or in small groups, or independently. We'll utilize several different online tools for practice, including:
  - IXL
  - DeltaMath
  - Brilliant
  - MyOpenMath
  - Ck12
  - Mathplanet