

Algebra 1

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| Grades: | 7th - 10th |
| Prerequisite: | Students should have successfully completed a Pre-Algebra course OR students should have strong middle school math skills, and have been introduced to the following concepts: <ul style="list-style-type: none">• Four operations on integers• The order of operations• Variables• The coordinate plane |

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| Days of Week: | Monday AND Wednesday |
| Time of Class: | 3:00 – 4:00 pm |
| Length of Class: | 60 minutes |
| Semester: | Full year – 30 weeks |
| Tuition: | \$800.00 |

Class Dates:

Week 1 – Week of August 29

Week 2 – Week of September 5

Week 3 – Week of September 12

Week 4 – Week of September 19

Mid-Semester Break – Jewish High Holidays

Note: ALL the Jewish Holidays fall during the week this year and the way they hit there is an extra-long mid-semester break. Teachers will be giving a long-term project for students to work on during this time.

Week 5 – Week of October 24

Week 6 – Week of October 31

Week 7 – Week of November 6

Week 8 – Week of November 14

Week 9 – Week of November 28

Week 10 – Week of December 5

Make-Up Week – Week of December 12

Week 11 – Week of January 9

Week 12 – Week of January 16

Week 13 – Week of January 23

Week 14 – Week of January 30

Week 15 – Week of February 6

Week 16 – Week of February 13

Mid Semester Break: Week of February 20 – President's Day

Week 17 – Week of February 27

Week 18 – Week of March 6

Week 19 – Week of March 13

Week 20 – Week of March 20

Make Up Week – Week of March 27

Week 21 – Week of April 17

Week 22 – Week of April 24
Week 23 – Week of May 1
Week 24 – Week of May 8
Week 25 – Week of May 15
Week 26 – Week of May 22
Week 27 – Week of May 29
Week 28 – Week of June 5
Week 29 – Week of June 12
Week 30 – Week of June 19
Make Up Week – June 26

Instructor's Name: Tina Dewey
Instructor's Email: tinadeweyonline@gmail.com
Instructor's Phone: 517-348-9113

Description of Class:

In this course students will learn the fundamental algebraic skills which are necessary for other mathematic courses, as well as science related courses. Algebra I is designed to prepare students to be mathematically literate, value the usefulness of mathematics, and form habits which will lead to success in stem-related fields of study.

Class Approach:

During class students can expect to participate in a warm-up activity, have an opportunity to ask questions on the previous homework assignment, and learn new material while completing guided notes. Students are encouraged to actively participate in class using the chat feature. The “I do, we do, you do” approach is used for the instruction of new material. Completion of problems will gradually shift from the instructor modeling how to complete the problems to the student completing problems on their own.

Goals:

This course is designed to teach students the necessary skills for success subsequent math and science courses. In addition, students will develop number sense and the habits necessary for math success.

Textbook:

No textbook required. Students will be provided with files of the course materials by the instructor.

Additional Supplies/Resources Needed:

Access to a printer before each class meeting to print guided notes, homework assignments, study guides, and tests.

Student Expectations:

Students are expected to participate in class by completing the guided notes, responding to instructor questions, and asking for help when needed. Students are expected to complete homework according to the instructor's specifications and to the best of their ability. Completed homework must be turned in on time to earn credit. The homework answers and the steps used to find the answer will be provided to students after the time each assignment is due, but before the next class. Students are expected to read and apply instructor feedback on homework, use the provided answers to check their work, and correct errors on their assignments. To LEARN math, one must DO math.

Weekly Homework:

Homework practice assignments will be given for each lesson. Study guides to review the unit will be given before the unit test. Occasionally, spiral review will be assigned for both review and practice of previous concepts. Students can expect approximately one video lesson assignment a month in addition to the in-class lessons. An online skills practice website will be available to students who need extra practice on specific topics. The average student can expect to spend two to three hours on homework completion each week.

Homework Policy:

Completed assignments are due by 6pm Eastern on the day before the next class. Students will earn credit and feedback for completed assignments turned in on-time with steps shown. Homework is graded based on effort, and not necessarily correct answers. Students are expected to complete their work with their best effort, and with integrity. When students neatly and legibly show the mathematical process used to complete the homework problems, individual feedback on errors in their process will be provided.

Additional Policies:

Tests will be given for each unit, and a percentage grade provided by the instructor. Each student is required to complete the unit study guide, and work with the instructor to make any necessary corrections before the unit test will be made available. Each student will be provided the unit test individually after demonstrating their understanding of the concepts. Unit tests are due no later than 30 days after the completion of the unit, however it is suggested that each student completes the unit tests as soon as they are ready.

Evaluation and Grading:

Students will be evaluated on the following, and each category will be weighted as follows:

- Homework effort and on-time completion (30%)

- Participation in class (15%)

- Unit tests grades (55%)

Anticipated Weekly Course Schedule:

| Week | Topic |
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| Week 1 | Real number classifications and properties |
| Week 2 | Order of operations and evaluating expressions |
| Week 3 | Combining like terms, distributive property, and translating expressions |
| Week 4 | One-step and two-step equations and inequalities |
| Week 5 | Solving multi-step equations with variable on both sides |
| Week 6 | Infinite and no solution equations, Algebraic proportions, and literal equations |
| Week 7 | Coordinate plane review, defining relations and functions |
| Week 8 | Function notation, evaluating functions, and zeros |
| Week 9 | Slope, slope-intercept and standard form of linear functions, graphing lines written in slope-intercept form |
| Week 10 | Graphing lines by finding intercepts, point-slope form of linear functions, horizontal and vertical lines |

| Week | Topic |
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| Week 11 | Review linear functions, parallel and perpendicular lines |
| Week 12 | Word problems based on linear models |
| Week 13 | Solving systems of linear equations by graphing and substitution |
| Week 14 | Solving systems of linear equations with elimination, and application problems |
| Week 15 | More application problems, linear systems inequalities |
| Week 16 | Add and subtract monomials, exponent product and power rule |
| Week 17 | Quotient rule and negative exponents |
| Week 18 | Exponent rules review, scientific notation |
| Week 19 | Graphing exponential functions, growth and decay application |
| Week 20 | Geometric sequences |

| Week | Topic |
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| Week 21 | Classify, add, subtract, and multiply polynomials |
| Week 22 | Multiplying binomials and trinomials, dividing polynomials by a monomial, factoring out a GCF |

| Week | Topic |
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| Week 23 | Factoring polynomials with four terms, factoring trinomials |
| Week 24 | Graphing quadratics in standard form and vertex form |
| Week 25 | Transformations, solving quadratics by factoring |
| Week 26 | Solving quadratics using square roots and the quadratic formula |
| Week 27 | Quadratic application problems |
| Week 28 | Simplifying radicals, including variables |
| Week 29 | Add, subtract, and multiply radicals |
| Week 30 | Dividing radicals and solving radical equations |