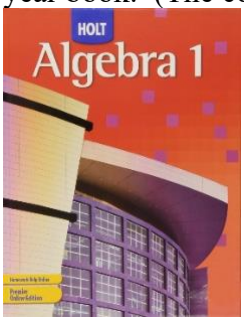
Revised 6/15/2026

Mathematics Class Descriptions 2026-2027

Algebra I, Level 2
Teacher: Liesl Fawthorp
Level: 2
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Text: *Globe Fearon Pacemaker Algebra* (ISBN10: 0130236381)
Additional required materials: Calculator
Homework time expectation: 1-2 hours weekly
Teaching format: lecture, homework, review assignments, tests, and in-class work
Description: This course will cover the basic concepts needed for an Algebra I credit and is geared to students who will not need higher level math for life/college or students who historically struggle with math. Tests are generally taken at home under parental oversight, occasional quizzes may be taken in class. Although Algebra I can be challenging for many students, the goal is to provide students with a positive, supportive environment in which to learn, and to help develop mathematical thinking skills which will enable them to be more successful and confident with their math abilities.

Algebra I, Level 3/4/5
Teacher: Anna Hight
Level: 3, 4 or 5
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Prerequisites: Students must have a basic introduction to using variables. Students must also be able to perform basic math skills including addition, subtraction, multiplication, and division of whole numbers, negative numbers, fractions and decimals without the use of a calculator. In addition, students must be able to graph points on a coordinate plane. Students who do not have the prerequisite skills will need to work on the areas of weakness in addition to the primary class materials, and should consider reviewing these topics over the summer before class.
Text: *Holt Algebra 1 - 2007* – Edward Burger et al. ISBN 10: 0030358272 / ISBN 13: 9780030358272 Copies of this book are readily available used online. Please be sure to order it in enough time to have it before the start of classes, and ensure that you have the correct year book. (The cover should look like this.)



Additional required materials:

- A TI-83, TI-84, TI-85 or similar calculator. “Plus” and “CE” models are acceptable. If the calculator is rechargeable, please ensure it is charged before classes. Please verify with the teacher that an alternative calculator is acceptable BEFORE the start of classes.

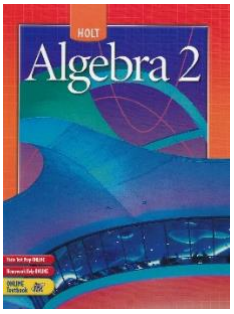
Students without a suitable graphing calculator will be at a significant disadvantage and cell phones may not be used as an alternative for tests, and I will not know how to help them use them.

- Graph paper, lined paper, a binder to keep homework sheets in, and a stapler

Homework time expectation: 3-4 hours weekly
Description: Algebra is a necessary tool for success in many fields and teaches not only practical mathematics, but foundational logical ability. Topics introduced in this course comprise much of college entrance exam math sections, and include expressions and equations, inequalities, linear functions and equations, systems of equations and inequalities, exponents, polynomial, and quadratic functions and equations.

Algebra 2, Level 2
Teacher: Bobbie Brickner
Level: 2
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Prerequisite: Successful completion of Algebra I
Required textbook: AGS Algebra 2 ISBN: 0-7854-3543-3
Several copies of the book are available in Mt. Sophia's library.
Additional required materials: Access to a home computer and internet. We may use Kahn Academy or YouTube videos. Calculator (TI-84 or 83 is recommended because it will be used through school, but it is not required), composition book, ruler, graph paper, 10 sealable envelopes, and 3-hole punch binder.
Homework time expectation: 4 hours weekly
Teaching format: Lecture, homework, review assignments, tests, in-class work
Description: Although we may not always recognize it, we use basic algebra every day in life. When we scale up a recipe, or when we try to determine if a business will be profitable, we are using algebra. This class builds on the concepts and skills covered in Algebra 1. Students will become better at handling data and linear representations, numbers and functions, systems of equations. New topics will include quadratic functions, polynomial functions, exponential and logarithmic functions.

Algebra 2, Level 3/4
Teacher: Anna Hight
Level: 3 or 4
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Prerequisites: Successful completion of and demonstrated proficiency in Algebra 1.
Text: *Holt Algebra 2 (1st Edition) 2004* - Rinehart and Winston Holt ISBN 10: 0030700442 ISBN 13: 9780030700446 Copies of this book are readily available used online. Please be sure to order it in enough time to have it before the start of classes, and ensure that you have the correct year book. (The cover should look like this.)



Additional required materials:

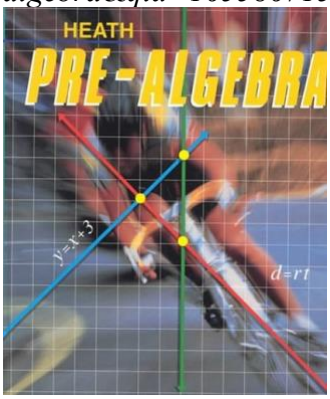
- A TI-83, TI-84, TI-85 or similar graphing calculator. "Plus" and "CE" models are acceptable. If the calculator is rechargeable, please ensure it is charged before classes. Please verify with the teacher that an alternative calculator is acceptable BEFORE the start of classes. Students without a suitable graphing calculator will be at a significant disadvantage and cell phones may not be used as an alternative for tests, and I will not be able to assist them learning to use them for matrices and graphing. Calculator use is mandatory.
- Graph paper, lined paper, a binder to keep homework sheets in, and a stapler

Homework time expectation: 3-4 hours weekly
Description: Algebra 2 builds on the foundation established in Algebra 1. Topics in this course include graphing data, an introduction to functions, systems of linear equations, inequalities, matrices, quadratic functions, exponential functions, logarithmic functions, polynomial functions, rational functions, radical functions and conic sections. There may be other topics covered, but
trigonometry *is not covered* in this course.

Geometry, Level 2*
Teacher: Bobbie Brickner
Level: 2
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Prerequisites: Successful completion of Algebra I
Text: ***Pacemaker Geometry*** by Globe Fearon, ISBN-10: 0130238376
Several copies of the book are available in Mt. Sophia's library. Alternately, you can purchase an inexpensive copy on Amazon:
https://www.amazon.com/Pacemaker-Geometry-Martha-C-Beech/dp/0130238376/ref=sr_1_1?crid=2VKTYH9736P6X&keywords=ISBN+-+10%3A+0130238376&qid=1677553434&sprefix=isbn+-+10+0130238376+%2Caps%2C192&sr=8-1
Additional materials: Calculator (TI-84 or 83 is recommended because it will be used throughout high school, but it is not required), compass, protractor, composition book, 3-hole punch binder, graph paper, 10 sealable envelopes for take-home tests
Homework time expectation: 2-3 hours weekly, varies by student
Description: Although we many not always recognize it, we use basic geometry every day in life. For instance, when we try to determine if a picture on the wall is parallel with the floor, or we calculate the area of a room when installing new carpeting. This course is designed to be

pain-free for students who may not like math, as well as for students who enjoy math. During class we will examine a variety of real-life uses of geometry. We will cover the basics of geometry while providing a sound foundation for future endeavors. Calculators will be used to save time when applicable.
*Geometry level 2 and Geometry level 3/4 are offered on alternate years so plan accordingly.

Pre-Algebra, Level 3
Teacher: Drew Magargee
Level: 3
Credit: 1 (for high school students)
Meet: Full year, Monday & Thursday (see grid)
Text: *Pre-Algebra*, D. C. Heath & Co. ISBN: 0669250449 – see link to amazon below
https://www.amazon.com/Heath-Pre-Algebra-Spaulding/dp/0669250449/ref=sr_1_5?crid=2FEU9SBL0TN8R&keywords=heath+pre-algebra&qid=1655867156&sprefix=heath+pre-algebra+%2Caps%2C91&sr=8-5

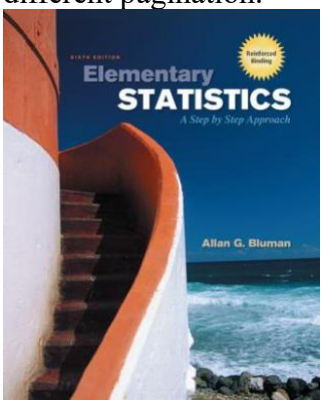


Additional required materials: Lined paper, graph paper, a binder for handouts, and a ruler.
Homework time expectation: 3-4 hours weekly
Teaching format: Lecture with in-class examples and exploration of topics; homework, quizzes, and tests.
Description: This course will introduce students to using variables and topics in algebra. It will prepare a student for a standard Algebra 1 course. It serves as a bridge between elementary mathematics and Algebra. Topics will include: Expressions; one and two step equations; order of operations; exponents; square roots; prime and composite numbers; operations with integers, fractions, and decimals; ratio and proportion; percent; geometry; graphing points and linear equations; probability and statistics; polynomials; the Pythagorean Theorem; and more.

Precalculus, Level 3/4
Teacher: Bobbie Brickner
Level: 3 or 4
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Prerequisites: Successful completion of Algebra II and Geometry
Text: *Precalculus: Mathematics for Calculus Fifth Edition*, by Stewart, Redlin and Watson.
ISBN-13: 978-0534492779 or ISBN-10: 0534492770

Additional required materials: Calculator (TI-84 or 83 or equivalent is recommended because it will be used through school, but it is not required), ruler, graph paper, 10 sealable envelopes for take-home tests
Homework time expectation: 4-6 hours weekly, varies by student and level
Description: In addition to laying the foundation for calculus, this course will present math skills that are necessary for success in multiple areas. Topics covered include functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, law of sines, law of cosines, systems of linear equations, and analytic geometry.

Statistics, Level 3
Teacher: Anna Hight
Level: 3 or 4
Credit: 1
Meets: Full year, Monday & Thursday (see grid)
Prerequisites: Successful completion of Algebra I & Algebra II. This class is only for 11th and 12th graders.
Text: *Elementary Statistics, A Brief Version, fourth edition* by Allan G. Bluman
ISBN: 9780073534961 There are a number of copies available in the MSA library, and there are many copies available online for a reasonable price. Please ensure that you have the textbook PRIOR to the start of class, and that it is the correct edition. Hardback copies have different pagination.



Additional required materials:
A TI-83, TI-84, TI-85 or similar calculator. "Plus" and "CE" models are preferred. If the calculator is rechargeable, please ensure it is charged before classes. Please verify with the teacher that an alternative calculator is acceptable BEFORE the start of classes. Students without a suitable graphing calculator will be unable to complete this class. Calculator use is mandatory.
Homework time expectation: 3-5 hours weekly
Description: This class follows a non-theoretical approach without proofs, and has an emphasis on intuitive explanations of concepts. This class will cover frequency distributions, a variety of graphs and charts, measures of central tendencies, normal distribution, variance, standard deviation, probability and counting rules, writing surveys, bias, z tests, t tests, χ^2 tests, hypothesis testing, and real life applications.

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