

Loudon County High School Scholars Prep Guide 2019-2020

Upcoming Course _____ Algebra 1A Yearlong _____

School _____ Loudon High School _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

- This class is only given to students specified by an IEP team, and covers the first part of the Algebra curriculum. It is part of a 2 year long Algebra class.

Areas that might be challenging for students:

- There is a lot of vocabulary for students to learn.
- While this class does a lot of review of basic skills, this is an Algebra class, and the students must show mastery of Algebra standards.

Suggestions on how students can prepare for the upcoming course:

- Students should have a good basis of their multiplication facts
- Students should be familiar with how to use a calculator
- Do their Homework!!!!

Suggested Activities or Resources (if applicable):

- Khan Academy

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Upcoming Course _____Algebra 1B Yearlong_____

School _____Loudon High School_____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

- This class is only given to students specified by an IEP team, and covers the second part of the Algebra curriculum. It is part of a 2 year long Algebra class.

Areas that might be challenging for students:

- There is a lot of vocabulary for students to learn.
- While this class does a lot of review of basic skills, this is an Algebra class, and the students must show mastery of Algebra standards.

Suggestions on how students can prepare for the upcoming course:

- Students can review work from Algebra 1A
- Students should have a good basis of their multiplication facts
- Students should be familiar with how to use a calculator
- Do their Homework!!!!

Suggested Activities or Resources (if applicable):

- Khan Academy
- Review notes from Composition Book from Algebra 1A

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Upcoming Course ____ Algebra 1 A/B _____

School ____ Loudon High School _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Students need to present daily, and keep up with daily school work. Students also need to be responsible about homework assigned, and our passing is much faster than they are used to. If a student does not understand something it is the student's responsibility to get the help they need.

Areas that might be challenging for students:

Students may have difficulties with writing equations and expressions from real world contexts and identifying variables in the real world context. Students need to write rules of sequences.

Suggestions on how students can prepare for the upcoming course:

Students need to know with 100% accuracy the following: factors of whole numbers, graphing linear equations, solving multi-step equations, fluency of multiplication and division, addition and subtraction of integers, operations involving fractions, and understanding that squaring a negative number is positive. Finally they need to be able to identify a function and be able to evaluate a function.

Suggested Activities or Resources (if applicable):

IXL, Khan Academy and YouTube

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Upcoming Course _____ Honors Alg I A and B _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

While still following the guidelines of Algebra I, honors level students should expect classroom discussions to be more in depth and explore topics in different ways. They should also expect assessments to be more difficult. Honors Algebra I students will also have a large project each nine-weeks.

Areas that might be challenging for students:

Honors Algebra I will move quickly and will require our students to further their understandings and be able to go deeper into the understandings that are needed to proceed to higher level maths.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course Geometry

School Loudon High School

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Geometry is an exploration of figures (polygons, lines, angles, three-dimensional figures), the properties of congruence and similarity, and using them to justify reasoning.

Areas that might be challenging for students:

Students will need to be able to justify steps and proofs with postulates, properties, definitions and theorems. There are many new terms in geometry that must be learned and applied to problem solving.

Suggestions on how students can prepare for the upcoming course:

Reviewing the properties of equality from Algebra 1 and practicing solving two-step equations would help the students move smoothly into geometry. A list of basic terms and definitions is available on Quizlet for the students to practice.

Suggested Activities or Resources (if applicable):

Quizlet has many lists of terms available in several formats. These are a great way to learn the vocabulary that is required for understanding.

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Upcoming Course _____ Geometry A _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Geometry A is a course that will cover approximately one half of the topics that are in the geometry course. Triangles, quadrilaterals, angles and the relationships within and between them will be covered. There will be an emphasis on congruence theorems and recognizing and identifying corresponding parts in figures. Similarity between objects and area, perimeter and volume will also be covered. Placement in this course is

Areas that might be challenging for students:

The initial process of learning Geometry can be a difficult transition from Algebra I. Students should be diligent in staying on task and working to stay on top of new material.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Geometry B _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Geometry B will pick up where Geometry A ended. There will be a review of the topics covered in Geometry A and then we will continue the study with circles, right triangle trigonometry, coordinate geometry and deeper analysis and application of geometry in modeling for real world applications. Placement in this course is determined by an IEP.

Areas that might be challenging for students:

If students struggled with part A of the class, they could encounter issues with items that are designed to scaffold off of models in part A.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Honors Geometry _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

This class is a one semester examination of the basic procedures and reasoning of problems dealing with line segments, lines, angles, triangles, circles, quadrilaterals and other polygons. It will also review the concepts of area of these shapes and volume of the three dimensional figures. Students will learn to justify statements in proofs and construct a simple proof in a two-column form. Geometry is a spatial oriented class that requires analytical thinking and problem-solving ability. As an Honors class, this course will substantially exceed the content standards, learning expectations, and performance indicators of the standard Geometry course. Tests will include more short answer, constructed response and essay types of questions that require a deeper understanding of course material. Class lessons will proceed at a faster pace and be more in-depth than standard class lessons. Assignments will include more writing and require more explanation on the part of the students. This class also has a project that allows the student a chance to demonstrate creativity and course knowledge.

Areas that might be challenging for students:

Students will encounter much deeper evaluation of the geometrical concepts. They must be prepared to go at a faster pace as well as be more in depth with the content.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course Algebra 2

School Loudon High School

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

- A. Characteristics of Functions*
- B. Quadratic Functions, Equations, and Relations*
- C. Polynomial Functions, Expressions, and Equations*
- D. Rational Functions, Expressions, and Equations*
- E. Radical Functions, Expressions, and Equations*
- F. Exponential and Logarithmic Functions and Equations*
- G. Trigonometric Functions*
- H. Probability*
- I. Statistics*

Areas that might be challenging for students:

Students need to have a strong basis of factoring expressions and functions because it makes up such a large portion of the course and is useful for so many applications.

Suggestions on how students can prepare for the upcoming course:

A strong understanding of Algebra 1 topics are critical for being successful in Algebra 2. Students can use the resources below to brush up on any Algebra 1 skills prior to beginning the course. In particular, students should be able to factor quadratics, solve multi-step equations, and use a calculator to graph functions.

Suggested Activities or Resources (if applicable):

Quizlet.com
Khan Academy
education.jlab.org

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Upcoming Course _____ Alg II A and B _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Algebra II is a mathematics course designed for students who have completed Algebra 1 and Geometry. Topics covered will include: Linear Functions and Relations, Systems of Linear Equations and Inequalities, Graphing in Space, Polynomials and Rational Expressions, Sequences, Exponents and Logarithms, Probability, Matrices, and Trigonometric Functions and Identities.

Areas that might be challenging for students:

Honors Algebra II will move quickly and will require our students to further their understandings and be able to go deeper into the understandings that are needed to proceed to higher level maths. The will not only require students to use the fundamentals they learned in algebra I, but also geometric models they learned in Geometry.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ Honors Alg II _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Honors Algebra 2 is an extension of the Honors Algebra 1 curriculum. Honors Algebra 2 is completed in 1 semester instead of the usual year-long Algebra 2 course. Algebra 2 builds a foundation of mathematics for those students going on to Pre-Calculus or an Advanced Statistics course.

Areas that might be challenging for students:

Honors Algebra II will move quickly and will only be semester long. Students must stay on task and work to fulfill requirements.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course Bridge Math

School LHS

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Bridge Math is a senior level math class which fills the graduation requirement for a fourth math. The class covers topics from pre-Algebra, Algebra 1, and Geometry.

Areas that might be challenging for students:

Although the class cover basic concepts, seniors that had trouble mastering concepts during their freshman and sophomore years may require extra help.

Suggestions on how students can prepare for the upcoming course:

Students should refresh their skills and memories of basic Algebra 1 and Geometry concepts during the summer before senior year.

Suggested Activities or Resources (if applicable):

Students should know at the end of their junior year whether they will be taking Bridge math. They should go to their math teachers and request some material they could take home over the summer and practice.

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Upcoming Course SAILS Math

School LHS

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

SAILS Math is a senior level math class which fills the graduation requirement for a fourth math.

This class is for those students who plan on attending a college or university but do not have at least a 19 on the math portion of their ACT. Students who made between a 16 – 18 on the ACT will be placed in this class.

Areas that might be challenging for students:

SAILS Math is a computer-based program and self-paced. While there will be an instructor in the class, it is the responsibility of the student to study, learn, and keep up with deadlines. The instructor is a facilitator.

SAILS Math is conducted like a college level class. Students must be of high enough maturity and responsibility to ensure success.

Suggestions on how students can prepare for the upcoming course:

Students should refresh their skills and knowledge of Algebra 1 and Geometry concepts during the summer before senior year.

Suggested Activities or Resources (if applicable):

Students should know at the end of their junior year whether they will be taking SAILS Math. They should go to their math teachers and request some material they could take home over the summer and practice.

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Upcoming Course _____ Applied Math _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

This course is a 4th year senior level math course that will focus on the practical applications of mathematics. This course is to prepare students for both college and the workplace. Students taking this course should have at least a 20 on the Math portion of the ACT. This course will provide a foundation for students entering a business application Calculus course or other general education mathematics course.

Areas that might be challenging for students:

Students will need to continue to work through mathematical processes and be prepared to learn how to further break down problems and relate them to daily use.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):

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Upcoming Course _____ DC Pre-Calculus _____

School _____ LHS _____

Curriculum for the upcoming course and information of which students should be aware: and areas that might be a challenge for students:

Dual Credit Pre-calculus is a course developed and guided by the State of Tennessee to provide an opportunity for students to earn a college credit at no cost to them. This course is designed to mimic a college course and will require study time outside of class and a commitment to learn. At the end of the course, students will take an online exam which will determine if they will receive credit as a college course. Students will still receive high school credit as a dual credit course, but must make at least a 75% on the online test to receive college credit. Students will study limits and end behavior of functions. Solving, analyzing and graphing polynomials, including finding and analyzing roots, extrema, turning points and inflections will be studied with an emphasis on trigonometric functions. Unit circle applications, trigonometric identities, vectors, and polar coordinates are also included in the learning objectives for the course.

Areas that might be challenging for students:

With this being a college level course, students will encounter much deeper evaluation of the class expectations. Also, students will take the final assessment which proves to be very difficult.

Suggestions on how students can prepare for the upcoming course:

Students can research web based programs that can help them get familiar with more mathematical concepts prior to coming into this class.

Suggested Activities or Resources (if applicable):