

LTT MATH CLASSES 2019-2020

ABOUT LTT'S MATH PROGRAM - What makes us unique?

- LTT mathematics classes are modeled on current best practice teaching methodologies and all math classes supplement our textbook based curriculum by incorporating various online tools that are becoming more and more prevalent in math education in high schools and universities. We use [aleks.com](https://www.aleks.com) for standards based spiral review, [Desmos.com](https://www.desmos.com) for hands on math activities, [Symbolab](https://www.symbolab.com), for online graphing, and [geogebra.com](https://www.geogebra.com) for exploring geometric relationships.
- Because we recognize that students work at different levels, we offer many of our math classes at both standard college prep and honors level. Students are offered the opportunity to earn honors points throughout the year on tests and homework assignments. If they complete the honors assignments and tests with acceptable grades (average on honors work > 75), they receive a special Honors designation on their final grade report.
- **To keep skills current, summer review assignments will be assigned by mid-June.** Depending on which class you take, these assignments will be in [aleks.com](https://www.aleks.com), [teachingtextbooks.com](https://www.teachingtextbooks.com), or downloadable pdf files. The assignments, which will review all of the prerequisites, will be due the first day of class and count as your first homework grade. If you have significant trouble with it, you should consider taking a review class over the summer.

TRANSITION TO ALGEBRA (1.5 hour tutorial) - This class is a gentle introduction to Algebra and is designed to build students' algebraic habits of mind and key mathematical ways of thinking. This class is targeted at both younger students who have finished elementary math and pre-algebra but do not feel quite ready for the rigors of our Algebra I class as well as older students who may have tried Algebra and had difficulty. This class could also work as a supplement to a student taking a pre-algebra course at home. Students explore algebraic logic puzzles and activities that connect to and extend algebra course topics as well as learn broadly applicable tools and strategies to help them make sense of basic algebra. We discuss and refine ideas as students work through mental mathematics activities, written puzzles, and spoken dialogues that engage them in cultivating mathematical knowledge, intuition, and skills. This class is a great transition from elementary level math to algebra. There are weekly homework assignments and students should expect to spend approximately 2 -3 hours per week on homework. Worktexts "Transition to Algebra" provided.

Prerequisites: pre-algebra skills with average elementary school arithmetic background. Previous experience with algebra is not required, however if initial algebra studies were problematic, this class may provide the solution! Placement test can be made available upon request.

Required Materials: 3 subject notebook with built in folder/dividers, scientific calculator

Material fee: \$55 - includes required worktexts

Tutor: Melissa Lamb, melissa745@gmail.com

ALGEBRA 1/HONORS ALGEBRA 1 (2 hour tutorial) – This course is intended for students with a firm foundation in the skills covered in a typical Pre-Algebra class and is geared for students who are dedicated to serious work done at home. This is a high school level class that can be taken at either the standard or honors level. You should expect 4+ hours of homework a week with periodic take-home tests. Because we only meet once per week, students must be prepared to do significant daily homework at home in between meetings including at least one [aleks.com](https://www.aleks.com) assignment. We will start with Chapter 3 of the textbook because Chapter 1 and 2 are Pre-Algebra topics. Required summer assignments will review these earlier topics. Topics covered in this class include: polynomial arithmetic, factoring polynomials, transforming formulas, algebraic fractions, negative exponents and scientific notation, functions and lines, equations and graphing, systems of linear equations, inequalities, rational and irrational numbers, and quadratic function.

Prerequisites: Students should have a good command of order of operations, evaluation simple and complex expressions, solving linear equations, problem solving process, signed number arithmetic, positive exponents, and the distributive property. Prerequisite to admission into this class is passing an Algebra readiness test administered by the instructor.

Required Materials: **Algebra 1**, by Larson, Boswell, Kanold and Stiff, published by McDougall Littell, Copyright 2007, ISBN 0618594027. (Can be purchased used through Amazon, Abe Books and other used book sources.) A **3-ring binder** with 5 dividers, lined and graph paper. You will also need a **calculator** that can handle trig. Functions and logarithms (the Casio FX-300 ES PLUS, the Casio fx-300MS, and the TI-30XS MultiView are examples for under \$20). Do not purchase a graphing calculator.

Material fee: \$65 – includes one year subscription to [aleks.com](https://www.aleks.com) and summer review assignments.

Tutor: Sandy Tracy, sandy@tracysite.com

ALGEBRA 2/HONORS ALGEBRA 2 (2 hour tutorial) – This course is intended for students with a firm foundation in basic Algebra skills and is geared for students who are dedicated to serious work done at home. This is a high school level class that can be taken at either the standard or honors level. You should expect 4+ hours of homework a week with periodic take-home tests.

Because we only meet once per week, students must be prepared to do significant daily homework at home in between meetings including at least one aleks.com assignment. We will start with Section 2.6 of the textbook because the earlier sections are Algebra 1 topics. Required summer assignments will review these earlier topics. Topics covered in this class include: systems of inequalities, factoring quadratics, quadratic equations and functions, rational expressions, complex fractions, irrational and complex numbers, direct and indirect variation, polynomial equations, systems of equations in 2 or more variables, exponential and logarithmic functions, triangle trigonometry, and trigonometric applications.

Prerequisites: Prerequisite to admission into this class is successful completion of the Algebra 1 class or passing an Algebra 2 readiness test administered by the instructor. [If a student is not ready for Algebra 2, the Algebra 1 class is a great place to begin.]

Required Materials: **Algebra 2**, by Larson, Boswell, Kanold and Stiff, published by McDougall Littell, Copyright 2007, ISBN 0618595414. (Can be purchased used through Amazon, Abe Books and other used book sources.) A **3-ring binder** with 5 dividers, lined and graph paper. You will also need a **calculator** that can handle trig. Functions and logarithms (the Casio FX-300 ES PLUS, the Casio fx-300MS, and the TI-30XS MultiView are examples for under \$20). Do not purchase a graphing calculator.

Material fee: \$65 – includes one year subscription to aleks.com and summer review assignments.

Tutor: Sandy Tracy, sandy@tracysite.com

GEOMETRY (1.5 hour tutorial) – This course is intended to introduce students to geometric problem solving. This is a high school level class that can be done at the standard college prep or honors level. Students will learn to recognize the appropriate application of rules, sound reasoning, and counter-argument in order to arrive at reliable conclusions. They will be encouraged to think critically about all aspects of the course material and will learn to communicate concepts clearly. The development of logical reasoning will be central to the course. Additionally, through discussion, careful thought, and general observation, students will develop an understanding and appreciation of the order that intrinsically exists in God’s creation, observing that mathematics is both inherently linked to the realities of our world and consistent with the existence and wisdom of our Creator. Students must be dedicated to independent study and willing to work hard. This is a high school level class. Four or more hours of homework a week, with periodic take-home tests, can be expected. Topics will include, but not be limited to, deductive reasoning, proofs, relationships of lines, angles, triangle congruence, coordinate geometry, polygons, area and volume, right triangle relationships, and basic trigonometry.

Prerequisites: Students should have taken Algebra I (grade B or better). Algebra skills needed include competence and confidence with signed number arithmetic; evaluating algebraic expressions; linear equations and functions; graphing lines; factoring quadratics; polynomial addition, subtraction and multiplication; building and solving systems of equations; and inequalities. A working understanding of radicals will also be helpful.

Required Materials: 1.5-inch 3-ring binder with 5 dividers, lined and graph paper, and scientific calculator. Geometry by Larson, Boswell, and Stiff, published by McDougall Littell, ISBN 0-618-14051-4.

Material fee: \$70 - includes one year subscription to aleks.com and geometry tool kit.

Tutor: Shayne Picard, shaypic@gmail.com
