

LTT MATH CLASSES 2022-2023

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

- The upper-level math classes will consist of a 1.5-hour in-person primary session on Wednesday and a 1-hour online session on Monday. This format will serve our families well by ensuring adequate instruction time, opportunity for a “mid-week” check-in, and convenient access for students on Mondays. (Students must have a camera and the ability to write on Zoom whiteboard. They need to log in through a computer, not a phone or Chromebook.)
- LTT math 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 IXL.com for standards based spiral review.
- 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. These assignments will be in IXL.com. The assignments, which will review the prerequisites, will be due the first day of class and counted as homework grades. If you have significant trouble with these assignments, you should consider taking a review class over the summer.

FUNDAMENTALS OF MATHEMATICS (1.5-hour tutorial) This is a middle school math course designed to bridge students between their elementary math studies and Pre-Algebra. This course will focus on fractions, decimals and percents. Fractions, in particular, are often something that students struggle with, and this struggle multiplies as they move further into higher math. The goal of this course is to help students understand and conceptualize these topics so that can move forward with greater confidence. We will approach the material through a variety of learning approaches which makes the material accessible to all learning styles. This course requires about 30 – 45 minutes of DAILY work outside of class.

Required Materials: 1/2 to 1 inch 3-ring binder for organizing handouts.

Materials fee: \$85 includes the worktexts, copy costs and other miscellaneous materials.

Tutor: Dana Cloutier, clouts4@yahoo.com

PRE-ALGEBRA (2-hour tutorial) This class will meet twice a week. We will meet for 1 hour on-line on Monday and for 1 hour in person on Wednesday. This format will allow for more in-depth interaction with the concepts. The course requires about 45 minutes to an hour of DAILY work outside of class. There will be required summer assignments to get students warmed up for the beginning of the school year.

Prerequisites: Admission into this course requires passing a readiness test administered by the instructor. If a student is not ready for this class, Fundamental of Mathematics would be an excellent starting course.

Topics covered in this class include: Variables, Expressions, Integers, Order of operation, Simplifying variable expressions, Solving equations, Multi-step equations, Inequalities, Factors, Greatest common factor, Rules of exponents, Scientific notation, equations and inequalities with rational numbers, ratios and proportions, the percent equation, percent applications, simple interest, relations and function, graphing, linear equations in two variable, slope, graphing a line in the slope-intercept form, the Pythagorean Theorem, distance and mid-point, Circumference and area of circles, basic statistics. Students often learn math as a lot of different, separate things they need to memorize and approach in separate ways. As a result, they quickly reach a point where they can't keep it all straight, feel overwhelmed, and conclude that they are no good at math. The goal of this course is to help students understand the concepts and the connections between the different concepts. This enables them to broaden their math knowledge and see how they can make connections between what they already know and the new things they are learning. This course is designed for middle school students who have completed their basic elementary math work (7th and 8th graders, although some 6th graders may be ready for this course). We will work through the basic math concepts that will lay a strong foundation for Algebra and high school level science. We will approach the material through a variety of learning approaches which makes the material accessible to all learning styles.

Required Materials: Pre-Algebra, by Larson, Boswell, Kanold and Stiff, published by McDougall Littell, Copyright 2005, ISBN 0618250034. (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 (I would highly recommend the Texas Instruments TI-30xs MultiView). Do not purchase a graphing calculator.

Material fee: \$45 - includes one year subscription to IXL, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

ALGEBRA 1/HONORS ALGEBRA 1 (2.5 hour tutorial) This class will meet twice a week. We will meet for 1 hour on-line on Monday and for 1.5 hours in person on Wednesday. This format will allow for more in-depth interaction with the concepts. The course requires about 45 minutes to an hour of DAILY work outside of class.

Topics covered in this class include: 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: Admission into this class requires either successful completion of Pre-Algebra or passing an Algebra readiness test administered by the instructor. Students should have a good command of order of operations, evaluation of simple and complex expressions, solving linear equations, problem solving process, signed number arithmetic, positive exponents, and the distributive property.

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 (I highly recommend the Texas Instruments TI-30XS MultiView). Do not purchase a graphing calculator. The use of a phone is not allowed.

Material fee: \$45 – includes one year subscription to IXL.com, summer review assignments, and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

ALGEBRA 2/HONORS ALGEBRA 2 (2.5 hour tutorial) **This class will be offered in the 2023-2024 school year.**

Topics covered in this class include: We will start with Chapter 2 of the textbook because Chapter 1 reviews 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: Admission into this class requires either successful completion of Algebra 1 taught by this instructor or passing an Algebra readiness test administered by the instructor.

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 scientific calculator (I highly recommend the Texas Instruments TI-30XS MultiView). Do not purchase a graphing calculator. The use of a phone is not allowed.

Material fee: \$45 - includes one year subscription to IXL.com, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

GEOMETRY/HONORS GEOMETRY (2.5 hour tutorial) This is a high school level math course will meet twice a week. We will meet for 1 hour on-line on Monday and for 1.5 hours in person on Wednesday. This format will allow for more in-depth interaction with the concepts. The course requires about 45 minutes to an hour of DAILY work outside of class. This course can be taken at either an Honors level or a standard level.

A goal of this course is to help students understand why the concepts work, not just how to find the answer. This helps promote mathematical reasoning and conceptual growth which allows students to analyze new situation and deduce answers.

Some of the topics covered include: parallel and perpendicular lines, triangle relationships, similarity, polygons and area, surface area and volume, right triangles and basic trigonometry, circles, transformations, and proofs.

Prerequisites: Admission into this class requires either successful completion of Algebra 1 taught by this instructor or passing an Algebra readiness test administered by the instructor. (If a student is not ready for Geometry, the Algebra 1 course is a great place to begin.)

Required Materials: McDougal Littell Geometry (2007 edition ISBN:978-0-618-59540-2). You will also need a calculator that can handle trig. Functions and logarithms (I highly recommend the Texas Instruments TI-30XS MultiView which can be purchased for under \$20). Do not purchase a graphing calculator. The use of phones is not allowed.

Material fee: \$45 - includes one year subscription to IXL.com, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com
