LTT MATH CLASSES 2021-2022

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

- After successfully piloting online math courses last year, LTT is improving the structure of math courses by providing additional class time this year. 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 may also join an optional help session on Fridays.
- 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 IXL.com for standards based spiral review, Desmos.com for hands on math activities, Symbolab, for online graphing, and 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 IXL.com, 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.

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.

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.

Prerequisites: Students are ready for this course if they are comfortable with adding, subtracting, multiplying, and dividing whole numbers, fractions, and decimals. They should also be able to convert fractions to decimals and decimals to fractions, know how to round numbers, have a basic awareness of exponents, and be able to find the perimeter and area of a rectangle and a triangle.

If you want to confirm that your student is ready for this course, you can ask for a placement test that will be administered by the instructor.

Required Materials: Pre-Algebra, by Larson, Bosewell, 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 toa 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 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, Bosewell, 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 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 toa an hour of DAILY work outside of class. This course can be taken at either an Honors level or a standard level.

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, Bosewell, 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.
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