Honors Pre-Calculus

Mr. John Lasher

Welcome to Honors Pre-Calculus.

We use the Larson book entitled Precalculus with Limits. I plan to give each student a book to keep at home within the first week and hope to have a classroom set for the students to use here at school. We also have classroom calculators but there are not enough for everyone to have their own. It is highly suggested that students invest in a graphing calculator for high school and college.

Grading policy: Homework will be given every night and checked at the beginning of the next class. Students will have an opportunity to ask questions and check answers. We will also typically have a classwork assignment to help review the topics that were taught in the previous classes. Homework will count 25% of the student’s grade. Classwork assignments will be graded for correctness and count 25% of the student’s grade. Quizzes will be part of the classwork assignments. Tests will mostly be full chapters and will count for 50% of the student’s grade. Students may retake quizzes and tests but only after making corrections on the original mistakes.

Class expectations: I expect each student to follow the policies established by Southwest Guilford High School and Guilford County Schools which includes the tardy policy, dress code, restrictions on food, drink, and electronic devices in the classroom. I expect students in the class to be mature, responsible adults and will treat them as such. Students are allowed to sit wherever they feel they can be the most successful and I do allow students to work in small groups to help facilitate learning until it becomes evident they are not making the best choices for their success. I do not expect students to copy each other’s work. Copying will result in zeroes for all people involved.

Final exam: The class has a NC final exam. It typically has 30-40 multiple-choice questions. It will be worth 20% of their final average and cannot be exempted.

Extra Credit: I give bonus questions on tests and/or research based questions. I do not give extra credit assignments to boost grades or make up for missing work.

Contact information: The best way to get in touch with me is via email, lasherj@gcsnc.com. The school phone number is 336-819-2970. I am at school early every morning for extra help but do have occasional meetings at that time as well. I suggest the student checks with me to make sure I am available before coming for help. I coach volleyball in the afternoons during the fall. The season ends in mid-October so I will be unavailable for after school tutoring until the season is over.

Topics covered in Pre-Calculus:

Chapter P: We will review some basic math concepts to make sure students “remember” some concepts that will help with success. Topics include graphing data, equations of graphs, slope, and graphs of lines

Chapter 1: Functions and their graphs: Graphs of functions, transformations of graphs, combinations of functions, and inverse functions

Chapter 2: Polynomial and Rational Functions: Quadratic Functions, Rational Functions and their graphs, complex numbers, polynomial long division, and synthetic division

Chapter 3: Exponential and Logarithmic Functions: Both types of functions and their graphs, solving equations, and real world math problems.

Chapter 10: Conics: Parabolas, Ellipses, and Hyperbolas

Chapter 4: Trig. Functions: Radian measure, the unit circle, Right triangle trig, graphs and inverses of trig functions

Chapter 5: Analytic Trigonometry: Trig. Identities, Solving Trig. Equations, Sum and Difference formulas

Chapter 6: More Trig: Law of Sines, Law of Cosines, Area of a triangle using trig, vectors.

Chapter 10: Polar and Parametric Equations: Parametric equations, polar coordinates, Graphs of polar equations

Chapter 9: Sequences and Series: Arithmetic Sequences, Geometric Sequences, Partial Sums, Infinite Geometric Series

Chapter 12: Limits: Introduction to limits and techniques for evaluating limits