



Will Carleton Academy

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July 2021

Dear Parents and Students,

I hope all is well. Below is a brief synopsis for each class as well as what students are expected to bring to class at the beginning of the year:

Geometry: We will begin as the Greeks had 2300 years ago, where points have no part, lines have no breadth, circles need only a distance and center, parallel lines never intersect and all right angles are the same. From just these few rules, we will discover marvelous and entirely deducible truths. Interspersed between propositions, we will work through many area and perimeter questions, starting each day with a puzzle.

Algebra II: Starting with simple arithmetic, we are going to venture our way into the science of numbers and quantity. Two questions alone will govern much of our discernment: how many will I have at *this* point? and, how many do I have altogether? This will lead us to a thorough investigation of quantity and the idea of abstraction from reality to discover necessary, definitional truths.

PreCalculus: We are going to refresh our knowledge of Geometry and combine it with our study of Algebra to unify the seemingly disparate topics through Trigonometry. Branching off along the way, we will delve into many introductory maths interesting in their own respect, yet fundamental to understanding higher mathematics.

Business Math: We will be focused on the practical aspects of logic and mathematics to help figure out how the financial world operates. Topics will range from basic combinatorics and probability to economics and finance. It will be pertinent information—lessons that one could feasibly use outside of the classroom to help budget for the future. In addition, there will be many short readings centered on the notion of work so as to prepare students for life beyond high school.

AP Statistics: There is a *potential* that this class will be offered. More details to follow. In the likely event that this course is offered, we will cover the introductory ideas of a college statistics course. From a study on probability, to inferential statistics, to sampling techniques: the course is expansive but invaluable in a world where discourse is increasingly justified by studies and statistics.

Classes this year will follow a weekly routine of daily quizzes, lectures, individual work, and review. Students should expect to study their notes outside of class to prepare for the next day's quiz and for tests every three to four weeks.

Students should be prepared with individual and class supplies of the following:

- Sophomores: One box of facial tissues for the classroom
- Geometers: It is strongly recommended that you acquire a compass and a straight edge, as well as colored pencils.
- Everyone: Ample supplies with which to take notes.

Considering electronic supplies, a graphing calculator is recommended.

I hope to see you soon,

Mr. Kirk D. Williams
High School Mathematics Teacher
Will Carleton Academy