Welcome!
I am excited to be your math teacher and I look forward to working with you this year! In this class, we will learn about a variety of topics, including data analysis, implications and applications of polynomial functions, evaluating and graphing trigonometric functions, extending the real number system into complex numbers, and using mathematical equations to model real situations. I hope that by the end of this school year, you will be:

- More comfortable explaining your thinking to others. You’ll discover that working with partners and in groups will help you learn how to communicate math more clearly.
- A more confident and creative mathematical thinker. Don’t be afraid to take risks or make mistakes because trying different approaches and “tinkering” are valuable problem-solving skills.
- A stronger student. You will learn that taking good notes and spending quality time on your homework. This will pay off in terms of enhanced understanding and higher test scores.
- Able to take ownership of your own learning. Ask questions when you don’t understand something and proactively seek out help from your classmates or myself.
- Able to appreciate and recognize how math connects to the world around you.

Expectations
You are in this class to learn and LOVE math – we are in this together. To accomplish this goal, for us to have a good time (yes, it’s possible!), and for us to accomplish everything we need to get done, you will need to:

- attend class every day! This will be very important to your success and make this class easy.
- arrive to class prepared, on time, and ready to work until the end of class.
- spend quality time working on your homework and not be afraid to ask questions.
- be kind, respectful, and considerate towards the other members of the class and me.

Materials

- **Class Handouts:** You will receive a handout nearly every class period. You are expected to bring these back to class when assigned. Since this course is cumulative, it will be a good idea to keep these in your folder/binder throughout the year for reference.
- **Folder, Binder, Notebook designated for math:** You will need a folder or section of your binder designated for math. This should be an organized place for all of your work-including quizzes, tests, and homework.
- **Calculator:** We have a classroom set of TI-84 calculators. These calculators must remain in the classroom, if you would like to purchase a calculator for use at home, a graphing calculator (TI-83/84) is recommended.
- **Other materials:** You should come to class EVERY day with paper, pencils with erasers, and a willing attitude to learn!

Other School and Classroom Policies

- **Student Support and APP:** There are three ways to receive additional help in this class.
  1) During APP period. Use this time for my class and others!
  2) Monday, Wednesday, and Friday from 7:00 a.m.-7:40 a.m. by APPOINTMENT.
  3) After school most days until 3:30 p.m.
     I encourage all students to utilize these times throughout the year. This time is also available if you need to make up a test/quiz, hand in make-up work, or ask questions about missed class or assignments.
- **Cell Phones/Electronic Devices:** Unless specifically stated (you will be informed) that we will be using cell phones/computers to enhance our study, please do not use them in class.
- **Food and Drink:** Unless there exists a documented dietary need, no food or drink is allowed in the classroom. You may bring water. Please do not chew gum.
Grading

- **75% assessments**: quizzes, tests, and some projects

  Tests, quizzes, and projects will be given periodically throughout the year and at the end of each unit/concept. If for some reason you are absent on the day of an exam you will need to make it up at the SOONEST available time. Most often this will be during app period, after school or before school beginning at 7:00 a.m. by appointment. The best way to ensure success in this class will be to stay caught up.

- **25% assignments**: homework, classwork, some projects and group work

  Classwork, group work/projects and homework assignments will be consistently given. Assignments will be graded one of three ways:

  1) Each problem graded for completion and correctness. This will most often be done in class but occasionally I will collect all assignments and grade them.

  2) Random pick. 1-3 problems from the assignment will be chosen at random. The same problems will be graded for each student and the grade for that assignment will be determined by the completion and accuracy of those problems.

  3) Credit or No-Credit. I will take a quick glance at your paper and if you have legitimately attempted each problem then you will receive full credit for the assignment. Partial credit will be given accordingly for incomplete assignments.

  *You are required to show all of your work in order to receive full credit on ALL assignments. Most of the time, the process is more important than just a correct answer. Additionally, the correct process will lead you to the proper answer.*

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**Late Work**

- Can earn up to 100% if turned in on time (before unit test)
- Cannot earn credit after the unit test

**Absent Work**

- Absent work will be accepted for full credit if turned in within the late work timeframe and per Hillcrest make up policy

**Assessment Retakes**

- Retakes (for scores lower than 90%) will be available upon completion of checklist and meeting with Mr. Snyder
- Must be completed with the window provided by the teacher (based on the type of assessment)
- Final Exams cannot be retaken

**Note Taking**

- Students are expected to be active learners every class period. This will include taking notes during class and then utilizing those notes to study, review, and complete practice work
Welcome!

IB Math Studies is a course designed with an emphasis on applications of mathematics, and the largest section is on statistical techniques. It is designed for students with varied mathematical backgrounds and abilities. This class will offer students opportunities to learn important concepts and techniques and to gain an understanding of a wide variety of mathematical topics. It prepares students to be able to solve problems in a variety of settings, to develop more sophisticated mathematical reasoning and to enhance their critical thinking. Students taking this course are well prepared for a career in social sciences, humanities, languages or arts. These students will be able to utilize the statistics and logical reasoning that they have learned as part of the Math Studies course in their future studies.

The individual project (lots more information to come) is an extended piece of work based on personal research involving the collection, analysis and evaluation of data. Students should begin now thinking about a mathematical concept, application, theory, etc. that they find intriguing or particularly interesting that they want to explore in great detail.

Materials

- **Class Handouts:** You will receive a handout nearly every class period. You are expected to bring these back to class when assigned. Since this course is cumulative, it will be a good idea to keep these in your folder/binder throughout the year for reference.
- **Folder, Binder, Notebook designated for math:** You will need a folder or section of your binder designated for math. This should be an organized place for all of your work—including notes, quizzes, tests, and homework.
- **Calculator:** We have a classroom set of TI-84 calculators. These calculators must remain in the classroom, so purchasing one for home use may be desirable. This class places a high emphasis on proficient use of a graphing calculator (GDC)! We will use them more often most high school math classes.
- **Other materials:** You should come to class EVERY day with paper, pencils with erasers, and a willing attitude to learn!

Expectations

You are in this class to learn and enjoy mathematics—we are in this together. To accomplish this goal, for us to have a good time (yes, it’s possible!), and for us to accomplish everything we need to get done, you will need to:

- attend class every day! This will be very important to your success.
- arrive to class prepared, on time, and ready to work from the beginning until the end of class.
- spend quality time both during class and outside of class working on your homework, project, and individual study.
- be kind, respectful, and considerate towards the other members of the class.

Academic Honesty and Personal Integrity

The faculty at Hillcrest High School expects students to complete academic and nonacademic work that is authentic and respectful of intellectual property. As diploma candidates, you are expected to adhere to the school’s Policy for Academic Integrity, and also to the principles and practices set out in the IB Program. Ignorance of the standards related to academic honesty and student integrity is not an excuse for dishonesty, plagiarism and malpractice. You are expected to familiarize yourself with the policy. Academic honesty and integrity will be stressed throughout this course and adherence to such will be strictly enforced. Any violations will be addressed and consequences enforced.
Other School and Classroom Policies

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Course Outline/Curriculum Overview

**Topic 1 - Number & Algebra:** The aims of this topic are to introduce some basic elements and concepts of mathematics, and to link these to financial and other applications.

**Topic 2 - Descriptive Statistics:** The aim of this topic is to develop techniques to describe and interpret sets of data, in preparation for further statistical applications.

**Topic 3 - Logic, Sets, and Probability:** The aims of this topic are to introduce the principles of logic, to use set theory to introduce probability, and to determine the likelihood of random events using a variety of techniques.

**Topic 4 - Statistical Applications:** The aims of this topic are to develop techniques in inferential statistics in order to analyse sets of data, draw conclusions and interpret these.

**Topic 5 - Geometry & Trigonometry:** The aims of this topic are to develop the ability to draw clear diagrams in two dimensions, and to apply appropriate geometric and trigonometric techniques to problem-solving in two and three dimensions.

**Topic 6 - Mathematical Models:** The aim of this topic is to develop understanding of some mathematical functions that can be used to model practical situations. Extensive use of a GDC is to be encouraged in this topic.

**Topic 7 - Introduction to Differential Calculus:** The aim of this topic is to introduce the concept of the derivative of a function and to apply it to optimization and other problems.

All of these topics will be covered throughout the year. That being said, we will spend more time on the topics that have been determined to be those most unfamiliar to the students in the class. If there are specific topics that you feel you need additional knowledge/understanding of then it is your responsibility to let me know and I will help guide you in how you can obtain additional knowledge, practice and understanding. This should be something that you self-monitor throughout the year not shortly before taking the exam at the end of the year. We will need to move quickly through the material during the year in order to ensure we cover all that is expected.
Grading

• 75% assessments: quizzes, tests, and some projects
  Tests, quizzes, and projects will be given periodically throughout the year and at the end of each unit/concept. If for some reason you are absent on the day of an exam you will need to make it up at the SOONEST available time. Most often this will be during app period, after school or before school beginning at 7:00 a.m. by appointment. The best way to ensure success in this class will be to stay caught up.

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Late Work
- All assignments are expected to be completed by the specified due date. Work will not be accepted for credit if it is more than 3 class periods past the due date.

Absent Work
- Absent work will be accepted for full credit if turned in within the late work timeframe and per Hillcrest make up policy

Assessment Retakes
- Plan and prepare to be successful the day the assessment is given. There are no retakes except in extreme cases and will be considered on a case by case basis.

Note Taking
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Grading
• 60% Tests
• 15% Quizzes
• 25% Assignments

All student work will receive a grade between 0 – 4 based on mastery and completeness. The overall grade will be an average of all scores. The student grade in Skyward will show a percentage that correlates to the letter grade as seen in the table to the right.

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Attendance & APP
• Regular classroom attendance is critical to student success and nothing can replace the classroom experience. Students and parents should make school attendance a high priority. APP is a scheduled time each day for students to get academic support-get help completing assignments, retake assessments, etc. Students can also use APP to make up worked missed due to an absence.

Late or Absent Work
• Course work needs to be completed by the stated deadline.
• All work for a unit must be completed before the unit test.
• If a student is unable to complete work within the given time, they are expected to attend APP or before/after school to make up the missing work.

Assessment Retakes
• We believe all students need to make every effort to be ready for all quizzes and tests the first time; the process involved to retake assessments is lengthy and time consuming.
• If a student doesn’t show an acceptable level of understanding on an assessment, the student will need to attend APP or before/after school time to demonstrate to the teacher that they have improved their understanding, before retaking an assessment.
  o Complete or fix unit tasks, homework assignments & unit trackers
  o Analyze incorrect assessment answers to learn from mistakes
  o Complete additional practice problems

Homework
• Students will have assignments to complete outside of regular class time. They will consist of problems that will reinforce skills learned in previous weeks or months. Students are expected to be able to complete these assignments without assistance. If parents are noticing that their student doesn’t seem able to complete the assignments, the following resources are available:
  o Attending APP to get help from the teacher
  o Attending tutoring before or after school to get help from teachers/classmates
  o OPTIONAL: Online resources through MVP at rsgsupport.org for a small fee

Task Completion and Note Taking
• Students are expected to be active learners! This requires active engagement with task completion and group discussions which includes taking proper notes about the discussions and follow-up lessons.