



# Otumoetai College

## Mathematics Department

### Year 10 Mathematics 2019

Dear Parents/Caregivers - Kia ora and welcome back to OTC!

All students in Years 9 – 11 at Otumoetai College are required to study Mathematics - most students in Years 12 and 13 also study Mathematics and/or Statistics.

Year 10 will be taught in a collaborative learning space - although students are broadly streamed, two classes will regularly work together on various activities and investigations. Students will be consolidating and extending their current knowledge at relevant levels of the curriculum. To this end, there will be three types of lessons every week.

**Content based learning.** Teachers will cover the curriculum topic by topic, using a variety of resources to support students in their learning.

Students will also engage in **self directed learning** (with teacher assistance). They will be issued with **I Can Do** sheets for each topic, which list the objectives and curriculum levels, linked to learning resources. They will be able to work through any gaps at their own pace.

**Project work:** Finally, about once a week (on average) students will work in groups on some big project. Teachers want students to understand the way mathematics works in real life, and to get away from the more contrived text book approaches.

Parents can be of great assistance when supporting students in learning mathematics. Research confirms that most learning occurs when students are struggling, often for a prolonged period, rather than when they are getting a series of problems right. We expect students to struggle, to make mistakes, to try various approaches - indeed we celebrate this rather than criticise this. Students must work hard, develop resilience, be relentlessly curious, and to develop a range of problem solving strategies.

In 2019, Year 10 students will continue to strengthen their foundation of basic mathematical ability while preparing for NCEA assessment in the following year. Our aim is to create capable, confident and resilient learners.

#### Topics

1. Algebra
2. Probability
3. Geometry
4. Statistics
5. Measurement

Note that students are expected to have mastered most aspects of Number in previous years, but will revise parts of this (such as fractions, percentages and decimals) as they relate to the topic.

## Assessment

Students will be assessed at the beginning and end of each topic using an online Ministry of Education based **e-asTTle test**. Pre-tests will enable students and teachers to determine aspects already mastered, and highlight where most emphasis needs to be placed. Post tests will allow students to gauge their progress at the end of the topic. The I Can Do sheets mentioned above, which contain learning objectives linking test questions with page references in main textbooks, will help students to take responsibility for their learning, including allowing students to carry out background work on weaker areas in their own time.

1. The end of year examination focuses on Algebra.
2. Test and examination grades are used to help decide student subject placements within Mathematics and Statistics for the following year.

## Appeals

If a student is not satisfied with a particular assessment result, the student must discuss it with the class teacher immediately **-before** the assessment leaves the room.

If any student is not satisfied with the discussion he or she should approach Mr Ellwood (Head of Department) as soon as possible. The assessment will be handed to Mr Ellwood by the classroom teacher.

## Equipment

Students receive a separate stationery list. For this subject they will require quad books, the normal range of pens, rulers and protractors, as well as a scientific (or graphics) calculator.

## Homework

Homework will be set from a commercial web based package called Manga High. The cost will be \$10 for the year. The classroom teacher will set exercises weekly which students are to complete. The exercises are marked electronically and feedback is immediate. Feedback is the most effective way for students to learn.

## Mathematics Competitions

Your students will be invited to enter the Otago University NZ Mathematics competition and the Australian Mathematics competition. There will be a small charge to cover entry fees for these competitions. We encourage many students in Year 10 to enter. There is also a quiz competition between the Bay of Plenty schools called Mathmind.

**Your teacher and the Mathematics Department** have the responsibility to help students achieve to their full potential. If students, parents and teachers work together then students can achieve great progress.

**Students:** You have the responsibility to complete all set work to the best of your ability, to be in class on time, to meet all deadlines and to act and behave in a responsible manner so that you can achieve to your potential, along with all of your classmates.

**Final Comment:** A major focus this year is the development of a Mathematics and Statistics website which will be a repository for a large amount of information valuable to teachers, students and parents. Check this out at

<https://sites.google.com/otc.school.nz/otc-maths-and-stats/otc-maths>

***On behalf of all the OTC mathematics teachers , I wish your son or daughter a very successful 2018. Please do not hesitate to email your designated mathematics teacher with any queries or concerns.***

A handwritten signature in black ink, appearing to read 'J. Ellwood', written in a cursive style.

**Jason Ellwood  
HOD Mathematics  
February 2018**