

**Queen Margaret College**  
**Level 3 Mathematics with Calculus Programme 2019**  
**Level 8 of the New Zealand Curriculum**

Standard Number	Achievement Standard Title	Credits	Internal / External	Proposed assessment date
AS91575, 3.3	Apply trigonometric methods in solving problems	4	Internal	Term 1, Week 7
AS91578, 3.6	Apply differentiation methods in solving problems	6	External	Term 2, Week 2
AS91579, 3.7	Apply integration methods in solving problems	6	External	Term 2, Week 10
AS91587, 3.15	Apply systems of simultaneous equations in solving problems	3	Internal	Term 3, Week 9

### Course details

This course involves students thinking mathematically by solving problems and modelling situations in a range of contexts. Topics include differential calculus, integral calculus, systems of equations, and trigonometry.

### Assessment Information

#### EXTENAL ASSESSMENTS:

- At the end of each topic students sit a practice assessment similar to the external assessment.
- Students will also sit practice examinations for each external Achievement Standard during the QMC school examinations in the third term.

#### INTENAL ASSESSMENTS

- During the teaching of each topic, practice assessment tasks will be given to prepare the students for the final task.
- If a student is absent from the internal assessment, they must follow the school policy on absences for NCEA assessments.

### Course Information

- The *Mathematics Club* students is staffed by teachers every week, usually one at lunchtime and one after school. Students can attend to do their homework or receive some extra help.
- Some more able students will have the opportunity to participate in competitions:
  - ✓ The *Australian Mathematics Competition* is held in August (entry fee approximately \$6.50).
  - ✓ The *Senior Mathematics Competition* is held in May (entry fee approximately \$5).
- All students are registered with the Education Perfect software for Mathematics.
- Students must have a graphing calculator, preferably a Casio FX9750GII.

### Homework expectations

To be successful with Level 3 Mathematics, students should make full use of class time and do regular study each day. All students will be issued with individual workbooks (approximate cost \$30).

Your daughter should be learning at home for a total of at least 15 hours per week, across all subjects.

To achieve at a high level in this subject, students are expected to complete some homework during the week. Homework might include:

- Revision of daily/weekly content covered in class.
- Reading of text or reference material.
- Reinforcement of skills.
- Reflection of lessons and/or tasks.
- Preparation/revision for assessments.
- Completion of assignments.