Stage 6, 2025
Notice of Assessment Task
HSC Course in *Mathematics Extension 1*
Open-Book Examination

Date of initial notification:	Date of submission of task:
Monday 4 August 2025	Monday 18 August 2025
Term 3, week 3	Term 3, week 5

Teacher: Ms Wai	Task Number: 4

Time Allowed: 1 hour plus 10 minutes reading time	Weighting of Task: 30%

Course Component/Focus area/topic/module:

T3 Trigonometric Equations
C2 Further Calculus Skills
C3.1 Area and Volumes of Revolution
C3.2 Differential Equations

Task Description:

The task is an open-book examination comprising 2 sections.
Section 1 comprising 5 multiple-choice questions.
Section 2 comprising 4 short-response questions. Each question will cover one of the topics listed above.
In particular, your:
- Knowledge of compound angles in solving trigonometric equations.
- Integration skills, including applying substitution methods.
- Ability to find areas enclosed by curves, as well as volume of revolution, using integration.
- Knowledge of differential equations, including slope fields.

You are allowed to refer to **hand-written notes only** during the exam.

Submission of Task:
You are required to complete and submit the exam at the end of the allocated time.

Outcomes/Competencies to be assessed in this task:

ME12-3 applies advanced concepts and techniques in simplifying expressions involving compound angles and solving trigonometric equations
ME12-4 uses calculus in the solution of applied problems, including differential equations and volumes of solids of revolution
ME12-6 chooses and uses appropriate technology to solve problems in a range of contexts
ME12-7 evaluates and justifies conclusions, communicating a position clearly in appropriate mathematical forms

Feedback: How will I receive feedback on this task?

☐ Written

☐ Verbal

☐ Whole class

Marking Criteria
Each question will be allocated a mark and marks will be given based on the working out and solutions given by the student.

- *If you are absent on the day that the task is due, you MUST see your teacher the next day (not your next lesson) that you are present at school to show your medical certificate or produce a misadventure form (refer to your Assessment Booklet for a copy of the form).*
  If you fail to show a medical certificate, a mark of zero will be awarded and an N-Determination warning letter will be issued.
- *Exemptions and extensions for any other reason will only be determined at the discretion of the Head Teacher, and only in extenuating circumstances. You must advise the Head Teacher as soon as possible if you know you are unable to submit the task on the due date.*
- *All appeals must be lodged within 48hrs of receipt of the task. Students who may consider an appeal are not permitted to take their task home. The original task cannot be altered in any way prior to the appeal process.* See Assessment booklet for details.