Port Moresby International School

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Unit & Assessment Semester Outline for Students & Parents Grades 12.

Year	2026	Semester	2	Grade	12	Unit Value	1.0
Curriculum		PNG					
Subject Title/s		Mathematics					
Course Name		Advanced Maths					
Unit Name		Calculus -Differentiation, Integration &_Revision					

Assessment Tasks

Week Due	Topic(s)	Type of Task	Weighting
6	Trial Exam	Paper 1 – 2025	50%
6	Trial Exam	Paper 2 - 2025	50%

Learning outcomes against which the students will be reported

1.Understands, recalls and uses mathematical facts,

2.Appropriately selects mathematics to model and solve problems.

3.Interprets and communicates mathematical ideas in appropriate forms.

4.Develops logical arguments to support solutions and uses technology appropriately.

Assessment Criteria

The specific goals of this unit are for students to:

- Communicate mathematical processes and results verbally and in writing.
- Measure and use appropriate techniques and instruments to estimate and calculate physical quantities.
- Apply knowledge of numbers and their relationship to investigate a range of different context and identify, interpret, describe and represent various functions.
- Describe and explain interrelation between mathematical concepts.

Summary of Content

Weeks	Content Outline	Curriculum Links
1-2	**Differentiation:** Chain rule, quotient rule, product rule, exponential and logarithm functions, trigonometric functions.	12.3.3.8 12.3.3.9 12.3.3.10
3-4	**Anti- differentiation:** Constant of integration; Define theorem and rules of integrations; integration of trigonometric functions; Indefinite integrals.	12.3.3.11
5-6	**Definite integrals**: Areas under curves, between curves and the axes (above and below). TRIAL EXAMS	12.3.3.12 12.3.3.13
7-8	**Revision:** Trigonometry and Vectors, Patterns & Algebra.	Past Exam papers
9-10	**Revision:** Geometry, Calculus.	Past Exam papers
11-12	**Revision:** Statistics, graphs & functions, managing data, numbers and applications.	Past Exam papers
13-14	PNG Grade 12 External Exams - Week 13 - Examination week. Advanced Mathematics Paper 1 & 2 -2026.	