### A Mathematics Student's Lament

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# Introduction

The HSC

## The SACE

### 3.1 Stage 1

#### 3.1.1 Essential Mathematics

According to the SACE subject outline, Stage 1 Essential Mathematics covers the following topics.

1	Calculations, time, and ratio
2	Earning and spending
3	Geometry
4	Data in context
5	Measurement
6	Investing
7	Open topic

#### 3.1.2 General Mathematics

According to the SACE subject outline, Stage 1 General Mathematics covers the following topics.

1	Investing and borrowing
2	Measurement
3	Statistical investigation
4	Applications of trigonometry
5	Linear and exponential functions and their graphs
6	Matrices and networks
7	Open topic

#### 3.1.3 Mathematics

According to the SACE subject outline, Stage 1 Mathematics covers the following topics.

1	Functions and Graphs
2	Polynomials
3	Trigonometry
4	Counting and Statistics
5	Growth and Decay
6	Introduction to Differential Calculus
7	Arithmetic and geometric series and sequences
8	Geometry
9	Vectors in the plane
10	Further Trigonometry

### 3.2 Stage 2

#### 3.2.1 Essential Mathematics

According to the SACE subject outline, Stage 2 Essential Mathematics covers the following topics.

1	Scales, plans, and models
2	Measurement
3	Business applications
4	Statistics
5	Investments and loans
6	Open topic

#### 3.2.2 General Mathematics

According to the SACE subject outline, Stage 2 General Mathematics covers the following topics.

1	Modelling with linear relationships
2	Modelling with matrices
3	Statistical models
4	Financial models
5	Discrete models
6	Open topic

#### 3.2.3 Mathematical Methods

According to the SACE subject outline, Stage 2 Mathematical Methods covers the following topics.

1	Further differentiation and applications
2	Discrete random variables
3	Integral calculus
4	Logarithmic functions
5	Continuous random variables
6	Sampling and confidence intervals

#### 3.2.4 Specialist Mathematics

According to the SACE subject outline, Stage 2 Mathematical Methods covers the following topics.

1	Mathematical induction
2	Complex numbers
3	Functions and sketching graphs
4	Vectors in three dimensions
5	Integration techniques and applications
6	Rates of change and differential equations

The QCE

What's Missing?

### An Alternative

- 6.1 Stage 1 Year 11
- 6.1.1 Essential Mathematics
- 6.1.2 Statistical Methods
- 6.1.3 Calculus Methods
- ${\bf 6.1.4}\quad {\bf Linear~Algebra~Methods}$
- 6.1.5 Introduction to Analytic methods
- 6.2 Stage 2 Year 12
- 6.2.1 Essential Mathematics
- 6.2.2 Life Mathematics
- 6.2.3 Analytical Methods
- 6.2.4 Numerical Methods