

<b>Subject: VCE General Mathematics</b>		
<b>Unit: 1</b>		
<b>Week</b>	<b>Area of Study</b>	<b>Learning Focus</b>
HEADSTART, Holiday HW AND Weeks 1-3	Area of Study 1: Algebra and structure: Linear Relations	Substitution, Table of Values Solving Linear Equations One Unknown Developing Linear Formulae in one or two unknowns Transposition Simultaneous Equations including CAS Applications Problem Solving & Modelling
4-8	Area of Study 2: Arithmetic and Number: Computation and practical arithmetic	BODMAS Directed Numbers Powers, Roots Approximations, Decimal Places and Significant Figures Conversion of Units Logarithms Order of Magnitude Logarithmic Scale Percentages Percentage Increase and Decrease Geometric Sequence Applications Growth and Decay
9 - 11	Area of Study 6: Statistics: Investigating and Comparing Data Distributions	Types of Data Categorical Data Frequency Tables, Bar Charts Numerical Data: Shape, Location, Spread Dot plots, Stem-Leaf Plots Summarising Data Boxplots Comparing across 2 or more groups Statistical Investigation
12 -13	Area of Study 4: Geometry, measurement and trigonometry: Pythagoras' Theorem, Applications of Trigonometry	Pythagoras' Theorem: 2D, 3D Trigonometry: Unknown Sides, Angle, Applications Elevation, Depression, Bearings Extended Application & Problem Solving
14 - 15	Area of study 3: Discrete mathematics: Graphs and Networks	Graph Theory, What is a Graph? Isomorphic, Planar Graphs, Euler's Formula Trails, Paths, Circuits Traversable Graphs Eulerian Trails & Circuits Hamiltonian Paths & Circuits Weighted Graphs & Networks Minimum Spanning Trees Applications, Modelling & Problem Solving
Week 16	EXAM STUDY	
Week 17	UNIT 1 EXAM	
<b>Subject: VCE General Mathematics</b>		
<b>Unit: 2</b>		
<b>Week</b>	<b>Area of Study</b>	<b>Learning Focus</b>
1 - 3	Area of study 3: Discrete mathematics: Number Patterns and Recursions	Number Patterns Arithmetic Sequences, Applications & Recurrence Geometric Sequences, Applications & Recurrence Growth and Decay Recurrence Fibonacci
4 – 6	Area of Study 5:	Linear Modelling

	Graphs of linear and non-linear relations: Linear Graphs and Models	Determining slope, intercept-slope Finding equations from intercept and slope Finding equations using two points on the graph Using CAS calculators to find the equation
7 - 10	Area of Study 6: Statistics: Investigating Relationships	Investigating relationships between 2 numerical values Response and Explanatory variables Scatterplots – interpretation and construction Scatterplots on CAS Associations – identifying and describing Pearson’s correlation coefficient Correlation and causation Assumptions and estimation (Pearson coefficient) Least squares line to model linear association Using a regression line to predict interpolations and extrapolation Interpretation of the slope and intercept of regression lines Statistical investigations
11 – 13	Area of study 2: Arithmetic and number: Financial Arithmetic	Percentages and application GST, original price and percentage change Simple interest, interest rates Compound interest Comparisons of interest Personal loans analysis Inflation and effect Buying a Car Finance options, interest analysis and contributing factors
14 – 15	Area of Study 3: Discrete mathematics: Matrices	Basics & Practical Situations Add, Subtract, Scalar, Multiplication, Applications Communications, Connections Identity, Inverse, Encoding, Decoding Matrices: Simultaneous Equations Extended Application & Problem Solving
Week 16	EXAM STUDY	
Week 17	UNIT 2 EXAM	