

2018 Mathematics Yr 8 Semester 2

Term 3

Week	Unit	Learning Focus	Substrand
1 - 3	Decimals	<ul style="list-style-type: none"> • Converting fractions to decimals. • Rounding decimals. • Operations with decimals. • Terminating, non-terminating and recurring decimals. 	<ul style="list-style-type: none"> • Investigate terminating and recurring decimals (VCMNA274) • Investigate the concept of irrational numbers, including π (VCMNA275)
4 - 7	Measurement	<ul style="list-style-type: none"> • Converting units of measurement for area and volume • Finding perimeters and areas of parallelograms, trapeziums, rhombuses and kites • Investigating circles and finding circumference and area • Calculating volumes for rectangular and triangular prisms 	<ul style="list-style-type: none"> • Plot linear relationships on the Cartesian plane with and without the use of digital technologies (VCMNA283) • Plot graphs of non-linear real life data with and without the use of digital technologies, and interpret and analyse these graphs (VCMNA285)
8-10	Statistics	<ul style="list-style-type: none"> • Methods of sampling data. • Types of data. • Presenting data • Summary statistics. • Analysing data. • Outliers and their effects on summary statistics. 	<ul style="list-style-type: none"> • Distinguish between a population and a sample and investigate techniques for collecting data, including census, sampling and observation (VCMSP297) • Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (VCMSP298) • Explore the variation of means and proportions of random samples drawn from the same population (VCMSP299) • Investigate the effect of individual data values including outliers, on the range, mean and median (VCMSP300)

Term 4

Week	Unit	Learning Focus	Substrand
1 - 2	Index Laws	<ul style="list-style-type: none">• Learning the first, second, third and fourth Index Law including the zero index	<ul style="list-style-type: none">• Use index notation with numbers to establish the index laws with positive integral indices and the zero index (VCMNA272)
3 - 5	Linear Equations	<ul style="list-style-type: none">• Solving one and two step equations• Checking answers with substitution	<ul style="list-style-type: none">• Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (VCMNA284)
6 - 7	Probability	<ul style="list-style-type: none">• Using numbers to represent the likelihood of certain events taking place• Learning the language of probability and using tree and Venn diagrams to show outcomes and relationships between different groups	<ul style="list-style-type: none">• Identify complementary events and• use the sum of probabilities to solve problems (VCMSP294)• Describe events using language of 'at least', exclusive 'or' (A or B but not both), inclusive 'or' (A or B or both) and 'and' (VCMSP295)• Represent events in two-way tables and Venn diagrams and solve related problems (VCMSP296)
8-9	Percentages, Rates and Ratios, Profit and Loss	<ul style="list-style-type: none">• Investigate and calculate best buys and solve problems involving profit and loss	<ul style="list-style-type: none">• Solve problems involving profit and loss, with and without digital technologies (VCMNA278)
10	Linear and Non-Linear Relationships	<ul style="list-style-type: none">• Plot coordinates to create linear and non-linear graphs.• Analyse the key components of linear versus non-linear relationships.	<ul style="list-style-type: none">• Plot linear relationships on the Cartesian plane with and without the use of digital technologies (VCMNA283)• Plot graphs of non-linear real life data with and without the use of digital technologies, and interpret and analyse these graphs (VCMNA285)
11	Geometry	<ul style="list-style-type: none">• Develop an understanding of congruence of plane shapes and triangles• Use this knowledge to problem solve and to find unknown lengths and angles of triangles and quadrilaterals	<ul style="list-style-type: none">• Define congruence of plane shapes using transformations and use transformations of congruent shapes to produce regular patterns in the plane including tessellations with and without the use of digital technology (VCMMG291)