

YEAR 7 MATHEMATICS CURRICULUM

Semester 2 - Term 3

Week	Topic	Learning Focus	Substrand
1-4	Algebra	<ul style="list-style-type: none"> Determine patterns and rules from a sequence. Apply and determine rules/formulae. Substitute numbers into formulae. Determine a formula from a worded question. Define term, expression, equation, coefficient, variable and constant. Simplify expressions. Expand expressions in brackets. 	<ul style="list-style-type: none"> Introduce the concept of variables as a way of representing numbers using letters (VCMNA251) Create algebraic expressions and evaluate them by substituting a given value for each variable(VCMNA252) Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (VCMNA253) Design and implement mathematical algorithms using a simple general purpose programming language(VCMNA254)
5-7	Statistics	<ul style="list-style-type: none"> Classifying data Displaying data in tables Measures of centre Measures of spread Representing data graphically 	<ul style="list-style-type: none"> Identify and investigate issues involving numerical data collected from primary and secondary sources(VCMSP268) Construct and compare a range of data displays including stem-and-leaf plots and dot plots(VCMSP269) Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data(VCMSP270) Describe and interpret data displays using median, mean and range (VCMSP271)
8-10	Decimals and Percentages	<ul style="list-style-type: none"> Place value and comparing decimals Rounding decimals. Apply the operations $+$, $-$, \times, \div to decimals. Convert between fractions, decimals and percentages and compare values. Convert worded questions into fraction, decimal and percentage calculations. 	<ul style="list-style-type: none"> Round decimals to a specified number of decimal places (VCMNA246) Connect fractions, decimals and percentages and carry out simple conversions (VCMNA247) Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (VCMNA248) Recognise and solve problems involving simple ratios(VCMNA249)

Term 4

Week	Topic	Learning Focus	Substrand
1 - 3	Fractions and Decimals	<ul style="list-style-type: none"> • Explain terms such as fraction, decimal, numerator, denominator and improper fraction. • Simplify and find equivalent fractions. • Order fractions according to size. • Apply the operations +, -, ×, ÷ to fractions and decimals. • Convert between fractions and decimals and compare values. • Convert worded questions into fraction and, decimal calculations. 	<ul style="list-style-type: none"> • Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (VCMNA242) • Solve problems involving addition and subtraction of fractions, including those with unrelated denominators(VCMNA243) • Multiply and divide fractions and decimals using efficient written strategies and digital technologies(VCMNA244) • Express one quantity as a fraction of another, with and without the use of digital technologies (VCMNA245)
4 - 5	Positive and Negative Numbers	<ul style="list-style-type: none"> • Integers on the number line and number plane. • Adding, subtracting, multiplying and dividing of integers. 	<ul style="list-style-type: none"> • Compare, order, add and subtract integers(VCMNA241)
6 - 8	Linear Equations and Coordinates	<ul style="list-style-type: none"> • Using inverse operations • Creating expressions • Solving using backtracking • Balancing equations 	<ul style="list-style-type: none"> • Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point (VCMNA255) • Solve simple linear equations (VCMNA256) • Investigate, interpret and analyse graphs from real life data, including consideration of domain and range(VCMNA257) •
9	Indices	<ul style="list-style-type: none"> • Write numbers in index notation and expanded form. • Be able to perform index calculations, square roots and cube roots on the calculator and using mental arithmetic. 	<ul style="list-style-type: none"> • Investigate index notation and represent whole numbers as products of powers of prime numbers(VCMNA238) • Investigate and use square roots of perfect square numbers (VCMNA239)
10	Geometry	<ul style="list-style-type: none"> • Measuring angles • Constructing angles • Types of angles and definitions • Properties of triangles and quadrilaterals • Parallel and perpendicular lines 	<ul style="list-style-type: none"> • Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (VCMMG264) • Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning(VCMMG265) • Demonstrate that the angle sum of a triangle is 180° and use this to find the angle sum of a quadrilateral(VCMMG263) • Classify triangles according to their side and angle properties and describe quadrilaterals (VCMMG262)