

Australian Mathematics Content Map

Education Perfect Maths is an online learning resources with scaffolding smart lessons aligned to the Australian Curriculum. This table aligns the lessons provided by Education Perfect mapped to the Australian Curriculum.

Year 8 Australian Curriculum	
Number and Algebra	
Number and place value	Education Perfect Lessons
Use index notation with numbers to establish the index laws with positive integral indices and the zero index (ACMNA182)	Multiplying Indices Dividing Indices The Power of Zero Power of Powers Extra Resources: Powers Extra Resources: Squares & Square Roots Extra Resources: Index Laws Review: Indices
Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)	Integers Addition Subtraction Multiplication Division Long Division Order of Operations Negative Integer Addition and Subtraction Negative Integer Multiplication and Division Rational Numbers on the Number Line Adding and Subtracting Decimals on a Number Line Multiplying Decimals Dividing Decimals Extra Resources: Compare, Order & Locate Negative Numbers Extra Resources: Adding & Subtracting Negative Numbers Extra Resources: Multiplying & Dividing Negative Numbers Extra Resources: Using the Four Operations & Rounding Extra Resources: Factors and Multiples Extra Resources: Highest Common Factor and Lowest Common Multiple Extra Resources: Divisibility Tests Extra Resources: Prime Numbers
Real numbers	
Investigate terminating and recurring decimals (ACMNA184)	Decimals Terminating Decimals and Rounding Recurring Decimals Extra Resources: Review Decimals Extra Resources: Convert between Decimals, Fractions &

	Percentages Extra Resources: Terminating and Recurring Decimals & Irrational Numbers Review: Adding and Subtracting Decimals
Investigate the concept of irrational numbers, including π (ACMNA186)	Irrational Numbers
Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)	Discounts Calculating Percentage Discounts Percentages and Money Percentages and Populations Extra Resources: Percentage Increase and Decrease Extra Resources: Percentages, Fractions and Ratios Review: Introduction to Percentages Review: Percentages and Decimals Review: Converting Percentages to Fractions Review: Using Percentages
Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)	Ratios Rates Applying Ratios and Rates Extra Resources: Ratios Extra Resources: Rates Review: Converting Between Percentages and Fractions Review: Ratios
Money and financial mathematics	
Solve problems involving profit and loss, with and without digital technologies (ACMNA189)	Profit and Loss Calculating Profit and Loss Discounts Supply Chains Review: Percentage Discounts and Unit Pricing Review: Budgeting and Usage Plans
Patterns and algebra	
Extend and apply the distributive law to the expansion of algebraic expressions (ACMNA190)	Expanding I Expanding II Extra Resources: Introduction to Algebra Extra Resources: Substitution Extra Resources: Algebraic Operations Extra Resources: Expanding Review: Variables, Conventions and Arithmetic
Factorise algebraic expressions by identifying numerical factors (ACMNA191)	Greatest Common Divisor (Highest Common Factor) Introduction to Factorising Factorising Algebraic Expressions Factorising Algebraic Expressions with Powers Extra Resources: Factorising

<p>Simplify algebraic expressions involving the four operations (ACMNA192)</p>	<p>Simplifying Addition and Subtraction Simplifying Multiplication and Division Writing and Evaluating Algebraic Expressions Translating Between Situations and Algebraic Expressions Extra Resources: Algebraic Applications Review: Simplifying Expressions Review: Evaluating Expressions and Using Formulas</p>
<p>Linear and non-linear relationships</p>	
<p>Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)</p>	<p>Plotting Linear Relationships Features of Graphs Gradient of a Line Extra Resources: Points on a Cartesian Plane Extra Resources: Graphing Straight Lines Review: Tables of Values Review: Cartesian Planes</p>
<p>Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)</p>	<p>Rearranging Equations Solving Using Algebraic Methods Solutions to Linear Equations Applications of Linear Equations Extra Resources: Solving Equations Review: Introduction to Linear Equations</p>
<p>Measurement and Geometry</p>	
<p>Using units of measurement</p>	
<p>Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195)</p>	<p>Units of Area Converting Between Units of Area Converting Between Units of Area Applications Units of Volume Converting Units of Volume Review: Units of Measurement</p>
<p>Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)</p>	<p>Perimeters of Kites, Rhombuses, Trapeziums and Parallelograms Area of Parallelograms Area of Rhombuses and Kites Area of Trapeziums Review: Perimeter Review: Perimeters of Composite Shapes Review: Area</p>
<p>Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)</p>	<p>Parts of a Circle Circumference of Circles Using the Circumference of Circles Calculating the Area of Circles Using the Area of Circles</p>
<p>Develop formulas for volumes of rectangular and</p>	<p>Types of Prisms</p>

triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)	Calculating Volume of Triangular Prisms Calculating Volume of Cylinders Calculating Volume of Other Regular and Irregular Prisms Review: Volume of Rectangular Prisms
Solve problems involving duration, including using 12- and 24-hour time within a single time zone (ACMMG199)	Timetables Duration Clocks Time Zones
Geometric reasoning	
Define congruence of plane shapes using transformations (ACMMG200)	Introduction to Congruence Rotation and Reflection of Plane Shapes Translation and Congruence of Plane Shapes Review: Rotation Review: Reflection Review: Symmetry Review: Translation
Develop the conditions for congruence of triangles (ACMMG201)	Conditions for Congruence: SSS and SAS Conditions for Congruence: ASA, AAS and HL Working with Congruent Triangles Review: Angles
Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)	Congruence of Squares, Rectangles and Parallelograms Congruence of Rhombuses, Trapeziums and Kites Applications of Geometric Reasoning Review: Properties of Quadrilaterals
Statistics and Probability	
Chance	
Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)	Complementary Events Calculating Complements Extra Resources: Introduction to Probability Review: Probability
Describe events using language of 'at least', exclusive 'or' (A or B but not both), inclusive 'or' (A or B or both) and 'and'. (ACMSP205)	Describing Probabilities Using Descriptions of Probability Extra Resources: Multiple Events Extra Resources: Experimental Probability
Represent events in two-way tables and Venn diagrams and solve related problems (ACMSP292)	Venn Diagrams Two-Way Tables Using Venn Diagrams Using Two-Way Tables Extra Resources: Venn Diagrams Extra Resources: Two-Way Tables

Data representation and interpretation	
Investigate techniques for collecting data, including census, sampling and observation (ACMSP284)	Introduction to Data Collection Survey and Simulation Experiment and Observation Data Collection Methods Review: Data Sources & Data Types
Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)	Surveying Random Sampling Bias in Data
Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293)	Frequency Tables and the Mean Frequency Tables with Grouped Data Samples and Populations
Investigate the effect of individual data values, including outliers, on the mean and median (ACMSP207)	Frequency Tables, Median and Mode Clusters and Outliers Extra Resources: Mean, Median, Mode & Range Extra Resources: Outliers Extra Resources: Column Graphs, Frequency Tables & Line Plots Extra Resources: Dot Plots & Stem and Leaf Plots Extra Resources: Pie Charts & Segmented Bar Charts Extra Resources: Statistical Techniques Review: Measures of Centre and Spread Review: Displays of Data