

# 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 ( <a href="#">ACMNA182</a> )	<a href="#">Multiplying Indices</a> <a href="#">Dividing Indices</a> <a href="#">The Power of Zero</a> <a href="#">Power of Powers</a> <a href="#">Extra Resources: Powers</a> <a href="#">Extra Resources: Squares &amp; Square Roots</a> <a href="#">Extra Resources: Index Laws</a> <a href="#">Review: Indices</a>
Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies ( <a href="#">ACMNA183</a> )	<a href="#">Integers</a> <a href="#">Addition</a> <a href="#">Subtraction</a> <a href="#">Multiplication</a> <a href="#">Division</a> <a href="#">Long Division</a> <a href="#">Order of Operations</a> <a href="#">Negative Integer Addition and Subtraction</a> <a href="#">Negative Integer Multiplication and Division</a> <a href="#">Rational Numbers on the Number Line</a> <a href="#">Adding and Subtracting Decimals on a Number Line</a> <a href="#">Multiplying Decimals</a> <a href="#">Dividing Decimals</a> <a href="#">Extra Resources: Compare, Order &amp; Locate Negative Numbers</a> <a href="#">Extra Resources: Adding &amp; Subtracting Negative Numbers</a> <a href="#">Extra Resources: Multiplying &amp; Dividing Negative Numbers</a> <a href="#">Extra Resources: Using the Four Operations &amp; Rounding</a> <a href="#">Extra Resources: Factors and Multiples</a> <a href="#">Extra Resources: Highest Common Factor and Lowest Common Multiple</a> <a href="#">Extra Resources: Divisibility Tests</a> <a href="#">Extra Resources: Prime Numbers</a>
Real numbers	
Investigate terminating and recurring decimals ( <a href="#">ACMNA184</a> )	<a href="#">Decimals</a> <a href="#">Terminating Decimals and Rounding</a> <a href="#">Recurring Decimals</a>

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

factors ( <a href="#">ACMNA191</a> )	<a href="#">Factorising Algebraic Expressions</a> <a href="#">Factorising Algebraic Expressions with Powers</a> <a href="#">Extra Resources: Factorising</a>
Simplify algebraic expressions involving the four operations ( <a href="#">ACMNA192</a> )	<a href="#">Simplifying Addition and Subtraction</a> <a href="#">Simplifying Multiplication and Division</a> <a href="#">Writing and Evaluating Algebraic Expressions</a> <a href="#">Translating Between Situations and Algebraic Expressions</a> <a href="#">Extra Resources: Algebraic Applications</a> <a href="#">Review: Simplifying Expressions</a> <a href="#">Review: Evaluating Expressions and Using Formulas</a>
<b>Linear and non-linear relationships</b>	
Plot linear relationships on the Cartesian plane with and without the use of digital technologies ( <a href="#">ACMNA193</a> )	<a href="#">Plotting Linear Relationships</a> <a href="#">Features of Graphs</a> <a href="#">Gradient of a Line</a> <a href="#">Extra Resources: Points on a Cartesian Plane</a> <a href="#">Extra Resources: Graphing Straight Lines</a> <a href="#">Review: Tables of Values</a> <a href="#">Review: Cartesian Planes</a>
Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution ( <a href="#">ACMNA194</a> )	<a href="#">Rearranging Equations</a> <a href="#">Solving Using Algebraic Methods</a> <a href="#">Solutions to Linear Equations</a> <a href="#">Applications of Linear Equations</a> <a href="#">Extra Resources: Solving Equations</a> <a href="#">Review: Introduction to Linear Equations</a>
<b>Measurement and Geometry</b>	
<b>Using units of measurement</b>	
Choose appropriate units of measurement for area and volume and convert from one unit to another ( <a href="#">ACMMG195</a> )	<a href="#">Units of Area</a> <a href="#">Converting Between Units of Area</a> <a href="#">Converting Between Units of Area Applications</a> <a href="#">Units of Volume</a> <a href="#">Converting Units of Volume</a> <a href="#">Review: Units of Measurement</a>
Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites ( <a href="#">ACMMG196</a> )	<a href="#">Perimeters of Kites, Rhombuses, Trapeziums and Parallelograms</a> <a href="#">Area of Parallelograms</a> <a href="#">Area of Rhombuses and Kites</a> <a href="#">Area of Trapeziums</a> <a href="#">Review: Perimeter</a> <a href="#">Review: Perimeters of Composite Shapes</a> <a href="#">Review: Area</a>
Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to	<a href="#">Parts of a Circle</a> <a href="#">Circumference of Circles</a>

solve problems involving circumference and area ( <a href="#">ACMMG197</a> )	<a href="#">Using the Circumference of Circles</a> <a href="#">Calculating the Area of Circles</a> <a href="#">Using the Area of Circles</a>
Develop formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume ( <a href="#">ACMMG198</a> )	<a href="#">Types of Prisms</a> <a href="#">Calculating Volume of Triangular Prisms</a> <a href="#">Calculating Volume of Cylinders</a> <a href="#">Calculating Volume of Other Regular and Irregular Prisms</a> <a href="#">Review: Volume of Rectangular Prisms</a>
Solve problems involving duration, including using 12- and 24-hour time within a single time zone ( <a href="#">ACMMG199</a> )	<a href="#">Timetables</a> <a href="#">Duration</a> <a href="#">Clocks</a> <a href="#">Time Zones</a>
<b>Geometric reasoning</b>	
Define congruence of plane shapes using transformations ( <a href="#">ACMMG200</a> )	<a href="#">Introduction to Congruence</a> <a href="#">Rotation and Reflection of Plane Shapes</a> <a href="#">Translation and Congruence of Plane Shapes</a> <a href="#">Review: Rotation</a> <a href="#">Review: Reflection</a> <a href="#">Review: Symmetry</a> <a href="#">Review: Translation</a>
Develop the conditions for congruence of triangles ( <a href="#">ACMMG201</a> )	<a href="#">Conditions for Congruence: SSS and SAS</a> <a href="#">Conditions for Congruence: ASA, AAS and HL</a> <a href="#">Working with Congruent Triangles</a> <a href="#">Review: Angles</a>
Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning ( <a href="#">ACMMG202</a> )	<a href="#">Congruence of Squares, Rectangles and Parallelograms</a> <a href="#">Congruence of Rhombuses, Trapeziums and Kites</a> <a href="#">Applications of Geometric Reasoning</a> <a href="#">Review: Properties of Quadrilaterals</a>
<b>Statistics and Probability</b>	
<b>Chance</b>	
Identify complementary events and use the sum of probabilities to solve problems ( <a href="#">ACMSP204</a> )	<a href="#">Complementary Events</a> <a href="#">Calculating Complements</a> <a href="#">Extra Resources: Introduction to Probability</a> <a href="#">Review: Probability</a>
Describe events using language of 'at least', exclusive 'or' (A or B but not both), inclusive 'or' (A or B or both) and 'and'. ( <a href="#">ACMSP205</a> )	<a href="#">Describing Probabilities</a> <a href="#">Using Descriptions of Probability</a> <a href="#">Extra Resources: Multiple Events</a> <a href="#">Extra Resources: Experimental Probability</a>
Represent events in two-way tables and Venn diagrams and	<a href="#">Venn Diagrams</a>

<p>solve related problems (<a href="#">ACMSP292</a>)</p>	<p><a href="#">Two-Way Tables</a>  <a href="#">Using Venn Diagrams</a>  <a href="#">Using Two-Way Tables</a>  <a href="#">Extra Resources: Venn Diagrams</a>  <a href="#">Extra Resources: Two-Way Tables</a></p>
<p><b>Data representation and interpretation</b></p>	
<p>Investigate techniques for collecting data, including census, sampling and observation (<a href="#">ACMSP284</a>)</p>	<p><a href="#">Introduction to Data Collection</a>  <a href="#">Survey and Simulation</a>  <a href="#">Experiment and Observation</a>  <a href="#">Data Collection Methods</a>  <a href="#">Review: Data Sources &amp; Data Types</a></p>
<p>Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (<a href="#">ACMSP206</a>)</p>	<p><a href="#">Surveying</a>  <a href="#">Random Sampling</a>  <a href="#">Bias in Data</a></p>
<p>Explore the variation of means and proportions of random samples drawn from the same population (<a href="#">ACMSP293</a>)</p>	<p><a href="#">Frequency Tables and the Mean</a>  <a href="#">Frequency Tables with Grouped Data</a>  <a href="#">Samples and Populations</a></p>
<p>Investigate the effect of individual data values, including outliers, on the mean and median (<a href="#">ACMSP207</a>)</p>	<p><a href="#">Frequency Tables, Median and Mode</a>  <a href="#">Clusters and Outliers</a>  <a href="#">Extra Resources: Mean, Median, Mode &amp; Range</a>  <a href="#">Extra Resources: Outliers</a>  <a href="#">Extra Resources: Column Graphs, Frequency Tables &amp; Line Plots</a>  <a href="#">Extra Resources: Dot Plots &amp; Stem and Leaf Plots</a>  <a href="#">Extra Resources: Pie Charts &amp; Segmented Bar Charts</a>  <a href="#">Extra Resources: Statistical Techniques</a>  <a href="#">Review: Measures of Centre and Spread</a>  <a href="#">Review: Displays of Data</a></p>