



# BitMaths

Australian Curriculum Match  
Years 7–8

BitMaths covers all strands and sub-strands for Years 7–8. Refer to the tables to match content descriptions to the relevant BitMaths modules.

**Note:** **NA701** The Four Operations covers the Year 6 content description ‘Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)’.

| Year 7 Curriculum Match |                                     |   |   |
|-------------------------|-------------------------------------|---|---|
| Strand                  | Sub-strand                          | Content Description   | Module/s  |
| Number and Algebra      | Number and place value              | Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)                                | <b>NA702</b> Index Notation<br><b>NA703</b> Prime Factorisation     |
|                         |                                     | Investigate and use square roots of perfect square numbers (ACMNA150)   | <b>NA704</b> Square and Cube Numbers                                |
|                         |                                     | Apply the associative, commutative and distributive laws to aid mental and written computation (ACMNA151)                               | <b>NA705</b> Laws of Arithmetic                                     |
|                         |                                     | Compare, order, add and subtract integers (ACMNA280)  | <b>NA706</b> Adding and Subtracting Integers                        |
|                         | Real numbers                        | Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152) | <b>NA707</b> Equivalent Fractions                                   |
|                         |                                     | Solve problems involving addition and subtraction of fractions, including those with unrelated denominators (ACMNA153)                  | <b>NA708</b> Adding and Subtracting Fractions                       |
|                         |                                     | Multiply and divide fractions and decimals using efficient written strategies and digital technologies (ACMNA154)                       | <b>NA709</b> Multiplying and Dividing Fractions and Decimals        |
|                         |                                     | Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)                              | <b>NA710</b> Expressing Quantities as Fractions                     |
|                         |                                     | Round decimals to a specified number of decimal places (ACMNA156)   | <b>NA711</b> Rounding Decimals                                      |
|                         |                                     | Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)   | <b>NA712</b> Converting Between Fractions, Decimals and Percentages |
|                         |                                     | Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies (ACMNA158)    | <b>NA713</b> Finding Percentages                                    |
|                         |                                     | Recognise and solve problems involving simple ratios (ACMNA173)   | <b>NA714</b> Ratios   |
|                         | Money and financial mathematics     | Investigate and calculate ‘best buys’, with and without digital technologies (ACMNA174)   | <b>NA715</b> Discounts  |
|                         | Patterns and algebra                | Introduce the concept of variables as a way of representing numbers using letters (ACMNA175)  | <b>NA716</b> Variables in Algebra                                   |
|                         |                                     | Create algebraic expressions and evaluate them by substituting a given value for each variable (ACMNA176)                               | <b>NA717</b> Substitution in Algebra                                |
|                         |                                     | Extend and apply the laws and properties of arithmetic to algebraic terms and expressions (ACMNA177)                                    | <b>NA718</b> Applying Laws of Arithmetic to Algebra                 |
|                         | Linear and non-linear relationships | Given coordinates, plot points on the Cartesian plane, and find coordinates for a given point (ACMNA178)                                | <b>NA719</b> The Cartesian Plane                                    |
|                         |                                     | Solve simple linear equations (ACMNA179)  | <b>NA720</b> Solving Simple Linear Equations                        |
|                         |                                     | Investigate, interpret and analyse graphs from authentic data (ACMNA180)  | <b>NA721</b> Travel Graphs  |

| Year 7 Curriculum Match  |                             |   |   |
|--|-----------------------------|---|---|
| Strand   | Sub-strand                  | Content Description   | Module/s  |
| Measurement and Geometry   | Using units of measurement  | Establish the formulas for areas of rectangles, triangles and parallelograms, and use these in problem-solving (ACMMG159)   | <b>MG701</b> Formulas for Areas   |
|  |                             | Calculate volumes of rectangular prisms (ACMMG160)  | <b>MG702</b> Calculating the Volume of Rectangular Prisms                                   |
|  | Shape                       | Draw different views of prisms and solids formed from combinations of prisms (ACMMG161)   | <b>MG703</b> Views of Prisms and Solids   |
|  | Location and transformation | Describe translations, reflections in an axis and rotations of multiples of $90^\circ$ on the Cartesian plane using coordinates. Identify line and rotational symmetries (ACMMG181) | <b>MG704</b> Reflections and Translations<br><b>MG705</b> Rotations                         |
|  | Geometric reasoning         | Classify triangles according to their side and angle properties and describe quadrilaterals (ACMMG165)  | <b>MG706</b> Classifying Triangles and Quadrilaterals                                       |
|  |                             | Demonstrate that the angle sum of a triangle is $180^\circ$ and use this to find the angle sum of a quadrilateral (ACMMG166)  | <b>MG707</b> Angle Sums of Triangles and Quadrilaterals                                     |
|  |                             | Identify corresponding, alternate and co-interior angles when two straight lines are crossed by a transversal (ACMMG163)  | <b>MG708</b> Defining and Identifying Angles  |
|  |                             | Investigate conditions for two lines to be parallel and solve simple numerical problems using reasoning (ACMMG164)  | <b>MG709</b> Investigating Parallel Lines   |
|  | Statistics and Probability  | Chance  | Construct sample spaces for single-step experiments with equally likely outcomes (ACMSP167) |
| Assign probabilities to the outcomes of events and determine probabilities for events (ACMSP168) |                             |   | <b>SP702</b> Assigning Probabilities  |
| Data representation and interpretation   |                             | Identify and investigate issues involving numerical data collected from primary and secondary sources (ACMSP169)  | <b>SP703</b> Primary and Secondary Data   |
|  |                             | Construct and compare a range of data displays including stem-and-leaf plots and dot plots (ACMSP170)   | <b>SP704</b> Data Displays  |
|  |                             | Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data (ACMSP171)   | <b>SP705</b> Calculating Mean, Median, Mode and Range                                       |
|  |                             | Describe and interpret data displays using median, mean and range (ACMSP172)  | <b>SP706</b> Interpreting Data Displays   |



| Year 8 Curriculum Match   |                                     |   |   |
|---|-------------------------------------|---|---|
| Strand  | Sub-strand                          | Content Description   | Module/s  |
| Number and Algebra  | Number and place value              | Use index notation with numbers to establish the index laws with positive integral indices and the zero index (ACMNA182)  | NA801 Index Laws  |
|   |                                     | Carry out the four operations with rational numbers and integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183) | NA802 Operations with Integers and Fractions  |
|   | Real numbers                        | Investigate terminating and recurring decimals (ACMNA184)   | NA803 Terminating and Recurring Decimals  |
|   |                                     | Investigate the concept of irrational numbers, including $\pi$ (ACMNA186)   | NA804 Rational and Irrational Numbers   |
|   |                                     | Solve problems involving the use of percentages, including percentage increases and decreases, with and without digital technologies (ACMNA187)                 | NA805 Using Percentages<br>NA806 GST  |
|   |                                     | Solve a range of problems involving rates and ratios, with and without digital technologies (ACMNA188)  | NA807 Ratios and Rates  |
|   | Money and financial mathematics     | Solve problems involving profit and loss, with and without digital technologies (ACMNA189)  | NA808 Profit and Loss   |
|   | Patterns and algebra                | Extend and apply the distributive law to the expansion of algebraic expressions (ACMNA190)  | NA809 Expanding Algebraic Expressions   |
|   |                                     | Factorise algebraic expressions by identifying numerical factors (ACMNA191)   | NA810 Factorising Algebraic Expressions   |
|   |                                     | Simplify algebraic expressions involving the four operations (ACMNA192)   | NA811 Simplifying Algebraic Expressions   |
|   | Linear and non-linear relationships | Plot linear relationships on the Cartesian plane with and without the use of digital technologies (ACMNA193)  | NA812 Linear Relationships  |
|   |                                     | Solve linear equations using algebraic and graphical techniques. Verify solutions by substitution (ACMNA194)  | NA813 Solving Linear Equations  |
|   | Measurement and Geometry            | Using units of measurement  | Choose appropriate units of measurement for area and volume and convert from one unit to another (ACMMG195) |
| Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)   |                                     |   | MG802 Perimeter of Quadrilaterals<br>MG803 Area of Quadrilaterals   |
| Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197) |                                     |   | MG804 Circumference of Circles<br>MG805 Area of Circles   |
| Develop formulas for volumes of rectangular and triangular prisms and prisms in general. Use formulas to solve problems involving volume (ACMMG198)                                   |                                     |   | MG806 Volume of Prisms  |
| Solve problems involving duration, including using 12- and 24-hour time within a single time zone (ACMMG199)  |                                     |   | MG807 Solving Time Problems   |
| Additional content  |                                     |   | MG808 International Time  |
| Geometric reasoning   |                                     | Define congruence of plane shapes using transformations (ACMMG200)  | MG809 Congruence  |
|   |                                     | Develop the conditions for congruence of triangles (ACMMG201)   | MG810 Congruence of Triangles   |
|   |                                     | Establish properties of quadrilaterals using congruent triangles and angle properties, and solve related numerical problems using reasoning (ACMMG202)          | MG811 Congruence of Quadrilaterals  |

| Year 8 Curriculum Match    |  |  |  |
|----------------------------|--|--|--|
| Strand                     | Sub-strand                             | Content Description  | Module/s                                   |
| Statistics and Probability | Chance                                 | Identify complementary events and use the sum of probabilities to solve problems (ACMSP204)  | SP801 Complementary Events                 |
|                            |  | 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) | SP802 Probability Events                   |
|                            |  | Represent events in two-way tables and Venn diagrams and solve related problems (ACMSP292)   | SP803 Venn Diagrams and Two-way Tables     |
|                            | Data representation and interpretation | Investigate techniques for collecting data, including census, sampling and observation (ACMSP284)  | SP804 Census and Sampling                  |
|                            |  | Explore the practicalities and implications of obtaining data through sampling using a variety of investigative processes (ACMSP206)     | SP805 Data and Sampling                    |
|                            |  | Explore the variation of means and proportions of random samples drawn from the same population (ACMSP293)                               | SP806 Variation in Data                    |
|                            |  | Investigate the effect of individual data values, including outliers, on the mean and median (ACMSP207)                                  | SP807 The Effect of Individual Data Values |