

Mathletics

Australian Capital Territory (Australian Curriculum v9)

Scope & Sequence



Year 6

Mathletics

Year 6 Australian Curriculum v8.4			Year 6 Australian Curriculum v9			New Courses: Units of Work	Activities (Courses): Topics	Skill Quests	
Strand	Content Descriptions	Code	Strand	Outcomes	Code	NEW	Australian Curriculum v9 Yr 06		
Number	investigate everyday situations that use integers. Locate and represent these numbers on a number line	ACMNA124	Number	recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane	AC9M6N01	Y6 Integers	Introducing Integers	Understand integers	
	introduce the Cartesian coordinate system using all four quadrants	ACMMG143		identify and describe the properties of prime, composite and square numbers and use these properties to solve problems and simplify calculations	AC9M6N02		Multiples, factors, primes & composites	Prime, composite & square numbers	
	identify and describe properties of prime, composite, square and triangular numbers	ACMNA122		apply knowledge of equivalence to compare, order and represent common fractions including halves, thirds and quarters on the same number line and justify their order	AC9M6N03	Y6 Fractions Y6 Percentages	Equivalent fractions	Compare & order common fractions	
	compare fractions with related denominators and locate and represent them on a number line	ACMNA125		apply knowledge of place value to add and subtract decimals, using digital tools where appropriate; use estimation and rounding to check the reasonableness of answers	AC9M6N04	Y6 Decimals	Add/subtract decimal and fractions	Add/sub decimals - mental strategies Add/sub decimals - digital technologies Add/sub decimals - written method Add/sub decimals - estimating	
	add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers	ACMNA128		solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions	AC9M6N05	Y6 Fractions	Add/subtract decimal and fractions	Add & subtract proper fractions Add & subtract mixed numerals	
	solve problems involving addition and subtraction of fractions with the same or related denominators	ACMNA126		multiply and divide decimals by multiples of powers of 10 without a calculator, applying knowledge of place value and proficiency with multiplication facts; using estimation and rounding to check the reasonableness of answers	AC9M6N06	Y6 Decimals	Fractions, decimals & percentages	Multiply/divide decimals by powers of 10	
	make connections between equivalent fractions, decimals and percentages ➡ MOVED TO Y5	ACMNA131		solve problems that require finding a familiar fraction, decimal or percentage of a quantity, including percentage discounts, choosing efficient calculation strategies and using digital tools where appropriate	AC9M6N07	Y6 Fractions Y6 Percentages	Fractions, decimals & percentages	Find a fraction of a quantity Calculate percentages	
	multiply decimals by whole numbers and perform divisions by nonzero whole numbers where the results are terminating decimals, with and without digital technologies	ACMNA129							
	multiply and divide decimals by powers of 10	ACMNA130							
	find a simple fraction of a quantity where the result is a whole number, with and without digital technologies	ACMNA127							
make connections between equivalent fractions, decimals and percentages ➡ MOVED TO Y5	ACMNA131								
investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies	ACMNA132								

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Strand	Content Descriptions	Code	Strand	Outcomes	Code	NEW	Australian Curriculum v9 Yr 06		
Number			Number	approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies NEW	AC9M6N08		Add/subtract decimal and fractions Fractions, decimals & percentages	Rational numbers & percentages	
	select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers	ACMNA123		use mathematical modelling to solve practical problems involving natural and rational numbers and percentages, including in financial contexts; formulate the problems, choosing operations and efficient calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, justifying the choices made	AC9M6N09	Y6 Fractions Y6 Percentages Y6 Decimals	Fractions, decimals & percentages	Solve practical percentage problems	
Algebra	continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence	ACMNA133	Algebra	recognise and use rules that generate visually growing patterns and number patterns involving rational numbers	AC9M6A01		Algebra patterns equations & rules	Recognise & use rules for patterns	
	explore the use of brackets and order of operations to write number sentences	ACMNA134		find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations	AC9M6A02		Algebra patterns equations & rules	Understand order of operations	
				create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns NEW	AC9M6A03			Design flowcharts to solve problems Use rules & algorithms	
Measurement	connect decimal representations to the metric system	ACMMG135	Measurement	convert between common metric units of length, mass and capacity; choose and use decimal representations of metric measurements relevant to the context of a problem	AC9M6M01		Converting metric units	Connect decimals to the metric system Convert metric units of measurement	
	convert between common metric units of length, mass and capacity	ACMMG136		establish the formula for the area of a rectangle and use it to solve practical problems	AC9M6M02		Area and angle	Use formula for area of a rectangle	
	solve problems involving the comparison of lengths and areas using appropriate units	ACMMG137		interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys	AC9M6M03			Interpret & use timetables	
	interpret and use timetables	ACMMG139		identify the relationships between angles on a straight line, angles at a point and vertically opposite angles; use these to determine unknown angles, communicating reasoning	AC9M6M04		Area and angle	Understand angle properties	
	investigate, with and without digital technologies, angles on a straight line, angles at a point and vertically opposite angles. Use results to find unknown angles	ACMMG141							
	connect volume and capacity and their units of measurement MOVED TO Y8	ACMMG138							

Year 6 Australian Curriculum v8.4			Year 6 Australian Curriculum v9			New Courses: Units of Work	Activities (Courses): Topics	Skill Quests
Strand	Content Descriptions	Code	Strand	Outcomes	Code	NEW	Australian Curriculum v9 Yr 06	
Geometry			Space	compare the parallel cross-sections of objects and recognise their relationships to right prisms NEW	AC9M6SP01			Investigate cross-section
	introduce the Cartesian coordinate system using all four quadrants	ACMMG143		locate points in the 4 quadrants of a Cartesian plane; describe changes to the coordinates when a point is moved to a different position in the plane	AC9M6SP02		Shape and space	Points on the Cartesian plane
	investigate combinations of translations, reflections and rotations, with and without the use of digital technologies	ACMMG142		recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometric software where appropriate	AC9M6SP03		Shape and space	Use combinations of transformations
	construct simple prisms and pyramids REMOVED	ACMMG140						
Statistics	interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables	ACMSP147	Statistics	interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools; compare distributions in terms of mode, range and shape	AC9M6ST01		Mode & range	Interpret, compare & describe data sets Compare mode, range & shape
	interpret secondary data presented in digital media and elsewhere	ACMSP148		identify statistically informed arguments presented in traditional and digital media; discuss and critique methods, data representations and conclusions	AC9M6ST02			Interpret & evaluate secondary data
				plan and conduct statistical investigations by posing and refining questions or identifying a problem and collecting relevant data; analyse and interpret the data and communicate findings within the context of the investigation	AC9M6ST03			
Probability	describe probabilities using fractions, decimals and percentages	ACMSP144	Probability	recognise that probabilities lie on numerical scales of 0 – 1 or 0% – 100% and use estimation to assign probabilities that events occur in a given context, using common fractions, percentages and decimals	AC9M6P01		Probability	Assign probabilities
	conduct chance experiments with both small and large numbers of trials using appropriate digital technologies	ACMSP145		conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools; compare observations with expected results and discuss the effect on variation of increasing the number of trials	AC9M6P02			Conduct chance experiments
	compare observed frequencies across experiments with expected frequencies	ACMSP146						

	Term one	Term two	Term three	Term four
Unit 1	Number Space Integers and number properties <ul style="list-style-type: none"> Integers on a number line Integers on the cartesian plane 	Number Algebra Patterns and algebra <ul style="list-style-type: none"> Generate number patterns Find unknown values Create and use algorithms 	Number Operations, including money <ul style="list-style-type: none"> Order of operations Mixed operations Add & subtract decimals: Problem solving Multiply & divide decimals: Problem solving Budgeting 	Number Algebra Number and operations review <p>Review earlier content</p>
	Number Addition and subtraction <ul style="list-style-type: none"> Add and subtract decimals Mental, written and digital strategies Problem solving 	Number Fractions, decimals and percentages <ul style="list-style-type: none"> Find a fraction, decimal or percentage of a quantity Percentage discounts Round and estimate Problem solving 	Measurement Angles <ul style="list-style-type: none"> Angles within shapes Angles on a straight line Angles at a point Vertically opposite angles Determine unknown angles 	Space 3D objects <ul style="list-style-type: none"> Observe and draw shapes Compare cross-sections Right prisms Connect objects to their nets
Unit 2	Number Multiplication and division: Whole numbers <ul style="list-style-type: none"> Prime, composite & square numbers Multiply & divide whole numbers Mental & written strategies 	Number Algebra Multiplication and division: Decimals <ul style="list-style-type: none"> Multiply & divide decimals Powers of 10 Estimating 	Measurement Capacity and mass <ul style="list-style-type: none"> Convert measurements Decimal representations Problem solving 	Number Space Cartesian plane and 2D shapes <ul style="list-style-type: none"> Locate points on Cartesian plane Identify scales Draw lines and polygons Positional data
	Number Fractions <ul style="list-style-type: none"> Compare, order & represent common fractions Equivalent fractions Add and subtract fractions 	Space 2D shapes <ul style="list-style-type: none"> Properties of 2D shapes Classification Symmetry Transformations Tessellations 	Measurement Time <ul style="list-style-type: none"> Interpret and use timetables and itineraries Duration of events 	Statistics Data: Interpretation <ul style="list-style-type: none"> Statistically informed arguments Plan and conduct statistical investigations Compare distributions
Unit 3	Statistics Data: Representation <ul style="list-style-type: none"> Collect data Validate data Represent data Compare data sets Data visualisations 	Measurement Length, perimeter and area <ul style="list-style-type: none"> Convert units of length Decimal representations of length Area formula Perimeter and area connections Problem solving 	Probability Statistics Chance and data <ul style="list-style-type: none"> Represent probabilities numerically Estimate and assign probabilities List outcomes Conduct chance experiments Run simulations Record results Compare observations with expected results 	Measurement Measurement review and applications <ul style="list-style-type: none"> Choose appropriate units Use measurement in everyday situations
	Number Multiplication and division: Whole numbers <ul style="list-style-type: none"> Prime, composite & square numbers Multiply & divide whole numbers Mental & written strategies 	Number Algebra Multiplication and division: Decimals <ul style="list-style-type: none"> Multiply & divide decimals Powers of 10 Estimating 	Measurement Capacity and mass <ul style="list-style-type: none"> Convert measurements Decimal representations Problem solving 	Number Space Cartesian plane and 2D shapes <ul style="list-style-type: none"> Locate points on Cartesian plane Identify scales Draw lines and polygons Positional data
Unit 4	Statistics Data: Representation <ul style="list-style-type: none"> Collect data Validate data Represent data Compare data sets Data visualisations 	Measurement Length, perimeter and area <ul style="list-style-type: none"> Convert units of length Decimal representations of length Area formula Perimeter and area connections Problem solving 	Probability Statistics Chance and data <ul style="list-style-type: none"> Represent probabilities numerically Estimate and assign probabilities List outcomes Conduct chance experiments Run simulations Record results Compare observations with expected results 	Measurement Measurement review and applications <ul style="list-style-type: none"> Choose appropriate units Use measurement in everyday situations
	Number Addition and subtraction <ul style="list-style-type: none"> Add and subtract decimals Mental, written and digital strategies Problem solving 	Number Fractions, decimals and percentages <ul style="list-style-type: none"> Find a fraction, decimal or percentage of a quantity Percentage discounts Round and estimate Problem solving 	Measurement Angles <ul style="list-style-type: none"> Angles within shapes Angles on a straight line Angles at a point Vertically opposite angles Determine unknown angles 	Space 3D objects <ul style="list-style-type: none"> Observe and draw shapes Compare cross-sections Right prisms Connect objects to their nets
Unit 5	Number Addition and subtraction <ul style="list-style-type: none"> Add and subtract decimals Mental, written and digital strategies Problem solving 	Number Fractions, decimals and percentages <ul style="list-style-type: none"> Find a fraction, decimal or percentage of a quantity Percentage discounts Round and estimate Problem solving 	Measurement Angles <ul style="list-style-type: none"> Angles within shapes Angles on a straight line Angles at a point Vertically opposite angles Determine unknown angles 	Space 3D objects <ul style="list-style-type: none"> Observe and draw shapes Compare cross-sections Right prisms Connect objects to their nets

Strand	Outcomes and content descriptions	Located
Number	AC9M6N01 recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane	T1 U1 T2 U1 T4 U3
	AC9M6N02 identify and describe the properties of prime, composite and square numbers and use these properties to solve problems and simplify calculations	T1 U3 T2 U1
	AC9M6N03 apply knowledge of equivalence to compare, order and represent common fractions including halves, thirds and quarters on the same number line and justify their order	T1 U4 T2 U2
	AC9M6N04 apply knowledge of place value to add and subtract decimals, using digital tools where appropriate; use estimation and rounding to check the reasonableness of answers	T1 U2 T2 U2 T4 U1
	AC9M6N05 solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions	T1 U4 T2 U2 T4 U1
	AC9M6N06 multiply and divide decimals by multiples of powers of 10 without a calculator, applying knowledge of place value and proficiency with multiplication facts; using estimation and rounding to check the reasonableness of answers	T2 U3 T4 U1
	AC9M6N07 solve problems that require finding a familiar fraction, decimal or percentage of a quantity, including percentage discounts, choosing efficient calculation strategies and using digital tools where appropriate	T1 U4 T2 U2
	AC9M6N08 approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies	T2 U2, U3
	AC9M6N09 use mathematical modelling to solve practical problems, involving rational numbers and percentages, including in financial contexts; formulate the problems, choosing operations and efficient calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, justifying the choices made	T1 U2, U3, U4 T2 U1, U2, U3 T3 U1 T4 U1
Algebra	AC9M6A01 recognise and use rules that generate visually growing patterns and number patterns involving rational numbers	T2 U1
	AC9M6A02 find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations	T2 U1 T3 U1
	AC9M6A03 create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns	T2 U1

Strand	Outcomes and content descriptions	Located
Measurement	AC9M6M01 convert between common metric units of length, mass and capacity; choose and use decimal representations of metric measurements relevant to the context of a problem	T2 U5 T3 U3 T4 U5
	AC9M6M02 establish the formula for the area of a rectangle and use it to solve practical problems	T2 U5 T4 U5
	AC9M6M03 interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys	T3 U4 T4 U5
	AC9M6M04 identify the relationships between angles on a straight line, angles at a point and vertically opposite angles; use these to determine unknown angles, communicating reasoning	T3 U2
Space	AC9M6SP01 compare the parallel cross-sections of objects and recognise their relationships to right prisms	T4 U2
	AC9M6SP02 locate points in the 4 quadrants of a Cartesian plane; describe changes to the coordinates when a point is moved to a different position in the plane	T1 U1 T2 U4 T4 U3
	AC9M6SP03 recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometric software where appropriate	T2 U4
Statistics	AC9M6ST01 interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools; compare distributions in terms of mode, range and shape	T1 U5 T3 U5 T4 U4
	AC9M6ST02 identify statistically informed arguments presented in traditional and digital media; discuss and critique methods, data representations and conclusions	T1 U5 T4 U4
	AC9M6ST03 plan and conduct statistical investigations by posing and refining questions or identifying a problem and collecting relevant data; analyse and interpret the data and communicate findings within the context of the investigation	T3 U5
Probability	AC9M6P01 recognise that probabilities lie on numerical scales of 0 – 1 or 0% – 100% and use estimation to assign probabilities that events occur in a given context, using common fractions, percentages and decimals	T3 U5
	AC9M6P02 conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools; compare observations with expected results and discuss the effect on variation of increasing the number of trials	T3 U5

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Space Place value review Integers and number properties Integers on a number line Integers on the cartesian plane	AC9M6N01 recognise situations, including financial contexts, that use integers ... AC9M6SP02 locate points in the 4 quadrants of a Cartesian plane ...	Y6 Operations • Place value and rounding review Y6 Integers • Integers on the number Line • Integers on the cartesian Plane • Compare and order integers • Integers in context	Introducing Integers • Integers on a Number Line • Ordering Integers (Number Line) • Comparing Integers (<, =, >) • What's the Temperature (Celsius)?	Understand integers • Recognising situations that use integers • Locating & representing integers on a number line • Introducing the Cartesian plane Points on the Cartesian plane • Locating points on the Cartesian plane Prime, composite & square numbers • Introducing prime & composite numbers • Introducing square numbers		(Y7-H) Directed Numbers • Plotting on number lines (p 1) • Opposite directions- negative numbers (p 2) • Extending the number line (p 3) (Y7-H) Directed Numbers (AC Ready) • How does it work? (pp 1-13)
Unit 2 Number Addition and subtraction Add and subtract decimals Mental, written and digital strategies Problem solving	AC9M6N04 apply knowledge of place value to add and subtract decimals, using digital tools ... AC9M6N09 use mathematical modelling to solve practical problems ...	Y6 Operations • Addition and subtraction Y6 Decimals • Decimals and place value • Rounding decimals • Decimals and the number Line • Compare and order decimals • Add decimals • Subtract decimals • Addition strategies with decimals • Subtraction strategies with decimals	Add/subtract decimal and fractions • Decimal Complements • Adding Decimals • Subtract Decimals 1 • Estimate Decimal Sums 1 • Estimate Decimal Differences 1 • Estimate Decimal Sums 2 • Estimate Decimal Differences 2	Add/sub decimals - mental strategies • Adding decimals using mental strategies • Subtracting decimals using mental strategies Add/sub decimals – estimating • Estimating sums & differences of decimals Add/sub decimals - written method • Adding decimals using written method • Subtracting decimals using written method Add/sub decimals - digital technologies • Adding decimals using digital technologies • Subtracting decimals using digital technologies	Number & Algebra: Addition & Subtraction LEVEL 5–7 • Club money jar (DOK 3) • Square number puzzle (DOK 3) • Ropes and mazes (DOK 4)	(Y6-G) Addition and Subtraction • Written methods (pp 20–28)
Unit 3 Number Multiplication and division: Whole numbers Prime, composite & square numbers Multiply & divide whole numbers Mental & written strategies	AC9M6N02 identify and describe the properties of prime, composite and square numbers ... AC9M6N09 use mathematical modelling to solve practical problems, involving rational numbers and percentages ...	Y6 Operations • Multiplication • Division • Estimation • Using the four operations Y6 Number properties • Factors and multiples • Divisibility tests • Lowest common multiple • Highest common factor • Prime vs composite • Prime factors • Multiplying using prime factors • Dividing using prime factors • Square numbers	Multiples, factors, primes & composites • Prime or Composite? • Multiples • Multiples of • Highest Common Factor • Lowest Common Multiple		Number & Algebra: Multiplication & Division LEVEL 5–7 • True or false? (DOK 2) LEVEL 6–8 • Many ants make light work (DOK 2) • Orbiting lowest common multiples (DOK 2)	(Y7-H) Special Numbers, Factors and Multiples • Odd, even, prime and composite numbers (p 1) • Square numbers (p 3) (Y6-G) Multiplication and Division • Mental multiplication strategies (pp 1–6) • Mental division strategies (pp 7–12) • Written methods (pp 13–18) • Puzzles and investigations (pp 19–24)






Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 4 Number</p> <hr/> <p>Fractions</p> <p>Compare, order & represent common fractions Equivalent fractions Add and subtract fractions</p>	<p>AC9M6N03 apply knowledge of equivalence to compare, order and represent common fractions ...</p> <p>AC9M6N05 solve problems involving addition and subtraction of fractions ...</p> <p>AC9M6N07 solve problems that require finding a familiar fraction, decimal or percentage of a quantity ...</p> <p>AC9M6N09 use mathematical modelling to solve practical problems ...</p>	<p>Y6 Fractions</p> <ul style="list-style-type: none"> • Represent fractions • Types of fractions • Compare and order fractions with like denominators • Equivalent fractions • Simplifying fractions • Compare and order fractions • Add and subtract fractions • Add related fractions • Subtract related fractions • Problem-solving with fractions 	<p>Equivalent fractions</p> <ul style="list-style-type: none"> • Equivalent Fraction Wall 1 • Equivalent Fraction Wall 2 • Shading Equivalent Fractions • Identifying Fractions on a Number Line • Mixed and Improper Fractions on a Number Line • Equivalent Fractions • Comparing Fractions 1 • Compare Fractions 1a • Compare Fractions 1b <p>Add/subtract decimal and fractions</p> <ul style="list-style-type: none"> • Add Subtract Fractions 1 • Common Denominator • Add: Common Denominator • Subtract: Common Denominator • One Take Fraction • Add Like Mixed Numbers • Subtract Like Mixed Numbers 	<p>Compare & order common fractions</p> <ul style="list-style-type: none"> • Recognise, compare & represent common fractions • Comparing common fractions on a number line <p>Add & subtract proper fractions</p> <ul style="list-style-type: none"> • Adding fractions with related denominators • Subtracting fractions with related denominators • Add & subtract fractions - related denominators <p>Add & subtract mixed numerals</p> <ul style="list-style-type: none"> • Adding fractions & mixed numerals • Subtracting fractions & mixed numerals 	<p>Number & Algebra: Fractions LEVEL 3–5</p> <ul style="list-style-type: none"> • Running a fraction of the race (DOK 2) <p>LEVEL 4–6</p> <ul style="list-style-type: none"> • It's a piece of pie! (DOK 2) • A yarn about simple fractions (DOK 2) 	<p>(Y6-G) Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> • Fractions (pp 1–11) • Calculating (pp 28–30)
<p>Unit 5 Statistics</p> <hr/> <p>Data: Representation</p> <p>Collect data Validate data Represent data Compare data sets Data visualisations</p>	<p>AC9M6ST01 interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools ...</p> <p>AC9M6ST02 identify statistically informed arguments presented in traditional and digital media ...</p>			<p>Interpret, compare & describe data sets</p> <ul style="list-style-type: none"> • Two-way tables • Side-by-side column graphs • Comparing & selecting bivariate data displays 	<p>Statistics & Data: LEVEL 5–7</p> <ul style="list-style-type: none"> • World rankings (DOK 4) • Lake Scaley fish (DOK 3) 	<p>(Y6-G) Data Representation</p> <ul style="list-style-type: none"> • Types of graphs 1 (pp 1–6) • Types of graphs 2 (pp 10–11) • Collecting and analysing data (pp 20–21)




Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 1 Number Algebra</p> <hr/> <p>Patterns and algebra</p> <p>Generate number patterns Find unknown values Create and use algorithms</p>	<p>AC9M6N01 recognise situations, including financial contexts, that use integers ...</p> <p>AC9M6N02 identify and describe the properties of prime, composite and square ...</p> <p>AC9M6N09 use mathematical modelling to solve practical problems ...</p> <p>AC9M6A01 recognise and use rules that generate visually growing patterns ...</p> <p>AC9M6A02 find unknown values in numerical equations involving brackets ...</p> <p>AC9M6A03 create and use algorithms involving a sequence of steps and decisions ...</p>	<p>Y6 Patterns and equivalence - coming soon</p> <ul style="list-style-type: none"> Patterns with whole numbers Patterns with fractions Patterns with decimals Problem solving with fractions 	<p>Algebra patterns equations & rules</p> <ul style="list-style-type: none"> Increasing Patterns Describing Patterns Find the Pattern Rule Table of Values Pattern Rules and Tables Number Sequences Up to 1 Million Writing Algebraic Expressions Missing Numbers: Variables Simple Substitution 	<p>Recognise & use rules for patterns</p> <ul style="list-style-type: none"> Continuing & creating number sequences <p>Design flowcharts to solve problems</p> <ul style="list-style-type: none"> Designing flowcharts to solve problems <p>Use rules & algorithms</p> <ul style="list-style-type: none"> Manipulating numbers using a given rule Creating algorithms for sets 	<p>Number & Algebra: Equations & Expressions LEVEL 4–6</p> <ul style="list-style-type: none"> Writing & interpreting (DOK 3) Solving unknowns (DOK 3) Pattern rules (DOK 3) Fraction and decimal addition patterns (DOK 2) Island hopper (DOK 4) <p>LEVEL 5–7</p> <ul style="list-style-type: none"> Keep it balanced (DOK 3) 	<p>(Y6-G) Patterns and Algebra</p> <ul style="list-style-type: none"> Patterns and functions (pp 1–17) Algebraic thinking (pp 18–25) Solving equations (pp 26–33) Properties of arithmetic (pp 36–41)
<p>Unit 2 Number</p> <hr/> <p>Fractions, decimals and percentages</p> <p>Find a fraction, decimal or percentage of a quantity Percentage discounts Round and estimate Problem solving</p>	<p>AC9M6N03 apply knowledge of equivalence to compare, order and represent common fractions ...</p> <p>AC9M6N04 apply knowledge of place value to add and subtract decimals ...</p> <p>AC9M6N05 solve problems involving addition and subtraction of fractions ...</p> <p>AC9M6N07 solve problems that require finding a familiar fraction ...</p> <p>AC9M6N08 approximate numerical solutions to problems involving rational numbers ...</p> <p>AC9M6N09 use mathematical modelling to solve practical problems ...</p>	<p>Y6 Fractions</p> <ul style="list-style-type: none"> Find a fraction of an amount Problem-solving fractions of amounts <p>Y6 Percentages</p> <ul style="list-style-type: none"> Percentages Fractions, decimals, percentages Percentages to fractions Fractions to percentages Percentages to decimals Decimals to percentages Decimals to fractions Fractions to decimals Expressing as a percentage Percentages of an amount Discounts Sale price 	<p>Fractions, decimals & percentages</p> <ul style="list-style-type: none"> Fraction Wall Labelling 2 Fractions to Decimals Decimals to Fractions 1 Percentage to Fraction Decimals to percentages Common Fractions as Percentages (AU) Fractions to Percentages (Non-Calculator) Percents and Decimals Match Decimals and Percentages Calculating Percentages (Mental) Money Problems: Four Operations Time Conversions: Simple Fractions Time Conversions: Simple Decimals Fraction Word Problems Percentage Word Problems Model Fractions to Multiply Estimate Products with Fractions 	<p>Find a fraction of a quantity</p> <ul style="list-style-type: none"> Finding a fraction of a quantity <p>Calculate percentages</p> <ul style="list-style-type: none"> Calculating percentages <p>Rational numbers & percentages</p> <ul style="list-style-type: none"> Estimating solutions <p>Solve practical percentage problems</p> <ul style="list-style-type: none"> Solving practical percentage problems 	<p>Number & Algebra: Fractions LEVEL 4–6</p> <ul style="list-style-type: none"> The case of the missing superhero capes (DOK 2) Thunder Radio competition winners (DOK 2) <p>Number & Algebra: Percentages LEVEL 5–7</p> <ul style="list-style-type: none"> Simply equal (DOK 2) <p>Number & Algebra: Money LEVEL 5–7</p> <ul style="list-style-type: none"> Discount that car (DOK 4) 	<p>(Y6-G) Fractions, Decimals and Percentages</p> <ul style="list-style-type: none"> Topic 2 – Decimal fractions (pp 12–20) Fractions of an amount (pp 21–27)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 3 Number Multiplication and division: Decimals Multiply & divide decimals Powers of 10 Estimate	AC9M6N06 multiply and divide decimals by multiples of powers of 10 without a calculator ... AC9M6N08 approximate numerical solutions to problems involving rational numbers and percentages ... AC9M6N09 use mathematical modelling to solve practical problems ...	Y6 Decimals <ul style="list-style-type: none"> • Multiply decimals by powers of 10 • Multiply decimals by whole numbers • Divide decimals by powers of 10 • Divide decimals by whole numbers 	Fractions, decimals & percentages <ul style="list-style-type: none"> • Multiply Decimals: 10, 100, 1000 • Divide Decimals: 10, 100, 1000 • Estimate Decimal Operations 	Multiply/divide decimals by powers of 10 <ul style="list-style-type: none"> • Multiplying decimals by powers of 10 • Dividing decimals by powers of 10 • Using estimation 		Y6-G Fractions, Decimals and Percentages <ul style="list-style-type: none"> • Calculating (pp 37–38)
Unit 4 Space 2D shapes Properties of 2D shapes Classification Symmetry Transformations Tessellations	AC9M6SP02 locate points in the 4 quadrants of a Cartesian plane ... AC9M6SP03 recognise and use combinations of transformations to create tessellations and other geometric patterns ...			Use combinations of transformations <ul style="list-style-type: none"> • Recognising tessellations • Identifying a sequence of 2 transformations 	Geometry: 2D Shapes LEVEL 4–6 <ul style="list-style-type: none"> • Tricky triangles • Relating 2D shapes 	Y6-G Geometry <ul style="list-style-type: none"> • 2D shapes (pp 7–15) • Transformation, tessellation and symmetry (pp 16–24)
Unit 5 Measurement Length, perimeter and area Convert units of length Decimal representations of length Area formula Perimeter and area connections Problem solving	AC9M6M01 convert between common metric units of length, mass and capacity ... AC9M6M02 establish the formula for the area of a rectangle and use it to solve practical problems		Converting metric units <ul style="list-style-type: none"> • Centimetres and Metres • Metres and Kilometres Area and angle <ul style="list-style-type: none"> • Area: Squares and Rectangles 	Convert metric units of measurement <ul style="list-style-type: none"> • Converting metric units of length Use formula for area of a rectangle <ul style="list-style-type: none"> • Using a formula to calculate area of a rectangle 	Measurement: Length LEVEL 3–5 <ul style="list-style-type: none"> • Area and perimeter challenge (DOK 3) • Perimeter problems (DOK 3) LEVEL 4–6 <ul style="list-style-type: none"> • Card crafting calculation (DOK 2) Measurement: Area LEVEL 4–6 <ul style="list-style-type: none"> • Finding formulas (DOK 3) • Ryan's rectangle (DOK 3) 	Y6-G Length, Perimeter and Area <ul style="list-style-type: none"> • Units of length (pp 1–7) • Perimeter (pp 8–15) • Area (pp 16–25)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Algebra Operations, including money Order of operations Mixed operations Add & subtract decimals: Problem solving Multiply & divide decimals: Problem solving Budgeting	AC9M6N09 use mathematical modelling to solve practical problems ... AC9M6A02 find unknown values in numerical equations involving brackets ...	Y6 Operations • Order of operations Y6 Patterns and equivalence - coming soon • Unknown values - order of operations • Are these equivalent? order of operations	Algebra patterns equations & rules • Order of Operations 1 (BIDMAS) • Solve Equations: Add, Subtract 1 • Solve Equations: Multiply, Divide 1	Understand order of operations • Order of operations with no grouping symbols • Order of operations using grouping symbols • Order of operations practical situations		(Y6-G) Patterns and Algebra • Properties of arithmetic (pp 34–35)
Unit 2 Measurement Angles Angles within shapes Angles on a straight line Angles at a point Vertically opposite angles Determine unknown angles	AC9M6M04 identify the relationships between angles on a straight line, angles at a point and vertically opposite angles; use these to determine unknown angles, communicating reasoning		Area and angle • Measuring Angles • Estimating Angles • Angle Sum of a Triangle • Quadrilaterals: Angle Sum with Equations • Exterior Angles of a Triangle • Angles of revolution: Unknown Values • Vertically Opposite Angles: Unknown Values	Understand angle properties • Understanding adjacent angles • Exploring vertically opposite angles • Calculating angles that total 360 • Investigating supplementary & complementary angles	Geometry: Angles LEVEL 4–6 • Angles and quadrilaterals (DOK 3) LEVEL 5–7 • What's your angle? (DOK 3) • Comparing vertical and adjacent (DOK 3) • Adjacent angles (DOK 4) Geometry: 2D Shapes LEVEL 4–6 • Trying triangles (DOK 2) • Square split (DOK 3)	(Y6-G) Geometry • Lines and angles (pp 1–6)
Unit 3 Measurement Capacity and mass Convert measurements Decimal representations Problem solving	AC9M6M01 convert between common metric units of length, mass and capacity; choose and use decimal representations of metric measurements relevant to the context of a problem		Converting metric units • Grams and Kilograms 1 • Grams and Kilograms • Grams and Milligrams • Converting Units of Mass • Millilitres and Litres • Converting Volume	Connect decimals to the metric system • Decimal notation & the metric system • Decimal representation in capacity • Decimal representation in mass Convert metric units of measurement • Converting metric units of capacity • Converting metric units of mass	Measurement: Volume & Capacity LEVEL 4–6 • By the bucket (DOK 3) Measurement: Mass LEVEL 5–7 • Planets in balance (DOK 3)	(Y6-G) Volume, Capacity and Mass • Volume and capacity (pp 1–2, 8) • Mass (pp 9–16)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 4 Measurement</p> <p>Time</p> <p>Interpret and use timetables and itineraries</p> <p>Duration of events</p>	<p>AC9M6M03 interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys</p>		<p>Time conversions & problems</p> <ul style="list-style-type: none"> Time Conversions: Simple Fractions Time Conversions: Simple Decimals Time Mentals Elapsed Time 24 Hour Time Using Timetables 	<p>Interpret & use timetables</p> <ul style="list-style-type: none"> Interpreting & using timetables 	<p>Measurement: Time</p> <p>LEVEL 4–6</p> <ul style="list-style-type: none"> Muesli bar time jumble (DOK 2) Time for a break? (DOK 2) Mrs Baker's cookie conundrum (DOK 2) <p>LEVEL 5–7</p> <ul style="list-style-type: none"> Find the fastest ferry (DOK 2) 24-hour travel times (DOK 2) Circus timetable (DOK 3) 	<p>(Y5-F) Geometry</p> <ul style="list-style-type: none"> Lines and angles (pp 1–6) 2D shapes (pp 7–15) Transformation, tessellation and symmetry (pp 16–24)
<p>Unit 5 Probability Statistics</p> <p>Chance and data</p> <p>Represent probabilities numerically</p> <p>Estimate and assign probabilities</p> <p>List outcomes</p> <p>Conduct chance experiments</p> <p>Run simulations</p> <p>Record results</p> <p>Compare observations with expected results</p>	<p>AC9M6P01 recognise that probabilities lie on numerical scales of 0 – 1 or 0% – 100% ...</p> <p>AC9M6P02 conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools ...</p> <p>AC9M6ST01 interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables ...</p> <p>AC9M6ST03 plan and conduct statistical investigations by posing and refining questions ...</p>		<p>Probability</p> <ul style="list-style-type: none"> Simple Probability Probability Scale Complementary Events Dice and Coins <p>Conduct chance experiments</p> <ul style="list-style-type: none"> Conducting chance experiments 	<p>Assign probabilities</p> <ul style="list-style-type: none"> Probability as a fraction, decimal or percent Probabilities from 0 to 1 	<p>Chance & Probability</p> <p>LEVEL 4–6</p> <ul style="list-style-type: none"> What are the chances? (DOK 3) 	<p>(Y6-G) Chance and Probability</p> <ul style="list-style-type: none"> Chance and probability (pp 1–10)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
Unit 1 Number Algebra Number and operations review	AC9M6N04 apply knowledge of place value to add and subtract decimals ... AC9M6N05 solve problems involving addition and subtraction of fractions ... AC9M6N06 multiply and divide decimals by multiples of powers of 10 ... AC9M6N09 solve problems involving division ...	 Review earlier content	 Review earlier content	 Review earlier content	 Review earlier content	 Review earlier content
Unit 2 Space 3D objects Observe and draw shapes Compare cross-sections Right prisms Connecting objects to their nets	AC9M6SP01 compare the parallel cross-sections of objects and recognise their relationships to right prisms				Geometry: 3D Shapes LEVEL 4–6 <ul style="list-style-type: none"> Pyramids and prisms (DOK 3) LEVEL 5–7 <ul style="list-style-type: none"> Prisms made of straw (DOK 3) 	(Y6-G) Geometry <ul style="list-style-type: none"> 3D shapes (pp 25–32)
Unit 3 Space Number Cartesian plane and 2D shape Locate points on Cartesian plane Identify scales Draw lines and polygons Positional data	AC9M6SP02 locate points in the 4 quadrants of a Cartesian plane ... AC9M6N01 recognise situations, including financial contexts, that use integers ...		Shape and space <ul style="list-style-type: none"> Ordered Pairs Number Plane Graphing from a Table of Values Reading Values from a Line Transformations: Coordinate Plane Rotations: Coordinate Plane 		Geometry: Symmetry, Transformation & Location LEVEL 5–7 <ul style="list-style-type: none"> Calculating coordinates (DOK 2) 	(Y6-G) Position <ul style="list-style-type: none"> Spatial orientation (pp 1–5) Coordinates (pp 6–12) Maps and scale (pp 13–16) (Y7-H) The Number Plane <ul style="list-style-type: none"> How does it work? (pp 1–8) What else can you do? (pp 19–29)

Strand & Topic	Outcomes	New Courses	Activities (Courses)	Skill Quests	Challenges	Ebooks
<p>Unit 4 Statistics</p> <p>Data: Interpretation</p> <p>Statistically informed arguments Plan and conduct statistical investigations Compare distributions</p>	<p>AC9M6ST01 interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables ...</p> <p>AC9M6ST02 identify statistically informed arguments presented in traditional and digital media ...</p>		<p>Mode & range</p> <ul style="list-style-type: none"> Mode Mode from Stem and Leaf Plot Mode from Frequency Table Data Extremes and Range Stem and Leaf Plots with Range Double Stem and Leaf Plots Line Graphs: Interpretation 	<p>Interpret, compare & describe data sets</p> <ul style="list-style-type: none"> Describing & interpreting data sets <p>Compare mode, range & shape</p> <ul style="list-style-type: none"> Understanding mode, range & shape of distributions Comparing modes in sets of data <p>Interpret & evaluate secondary data</p> <ul style="list-style-type: none"> Interpreting & evaluating secondary data 	<p>Statistics & Data:</p> <p>LEVEL 4–6</p> <ul style="list-style-type: none"> Family ages (DOK 2) Dartboard scores (DOK 2) Messing with the median (DOK 2) Arrange the range (DOK 2) <p>LEVEL 5–7</p> <ul style="list-style-type: none"> Spot the mistake! (DOK 3) Missing dot plots (DOK 2) Box plot detective (DOK 2) Show your cards (DOK 3) A slice of the pie (DOK 3) Icy stalactite pie (DOK 3) Lake Scaley fish (DOK 3) 	<p>Y6-G Data Representation</p> <ul style="list-style-type: none"> Types of graphs 2 (pp 7–9) Types of graphs 3 (pp 12–19) Collecting and analysing data (pp 22–34) Data investigations (pp 35–39)
<p>Unit 5 Measurement</p> <p>Measurement review and applications</p> <p>Choose appropriate units Use measurement in everyday situations</p>	<p>AC9M6M01 convert between common metric units of length, mass and capacity ...</p> <p>AC9M6M02 establish the formula for the area of a rectangle and use it to solve practical problems</p> <p>AC9M6M03 interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys</p>		<p></p> <p>Review earlier content</p>	<p></p> <p>Review earlier content</p>	<p>Measurement: Length</p> <p>LEVEL 5–7</p> <ul style="list-style-type: none"> Jumpy and Bouncy (DOK 4) Platinum wire earrings (DOK 3) 	<p></p> <p>Review earlier content</p>

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