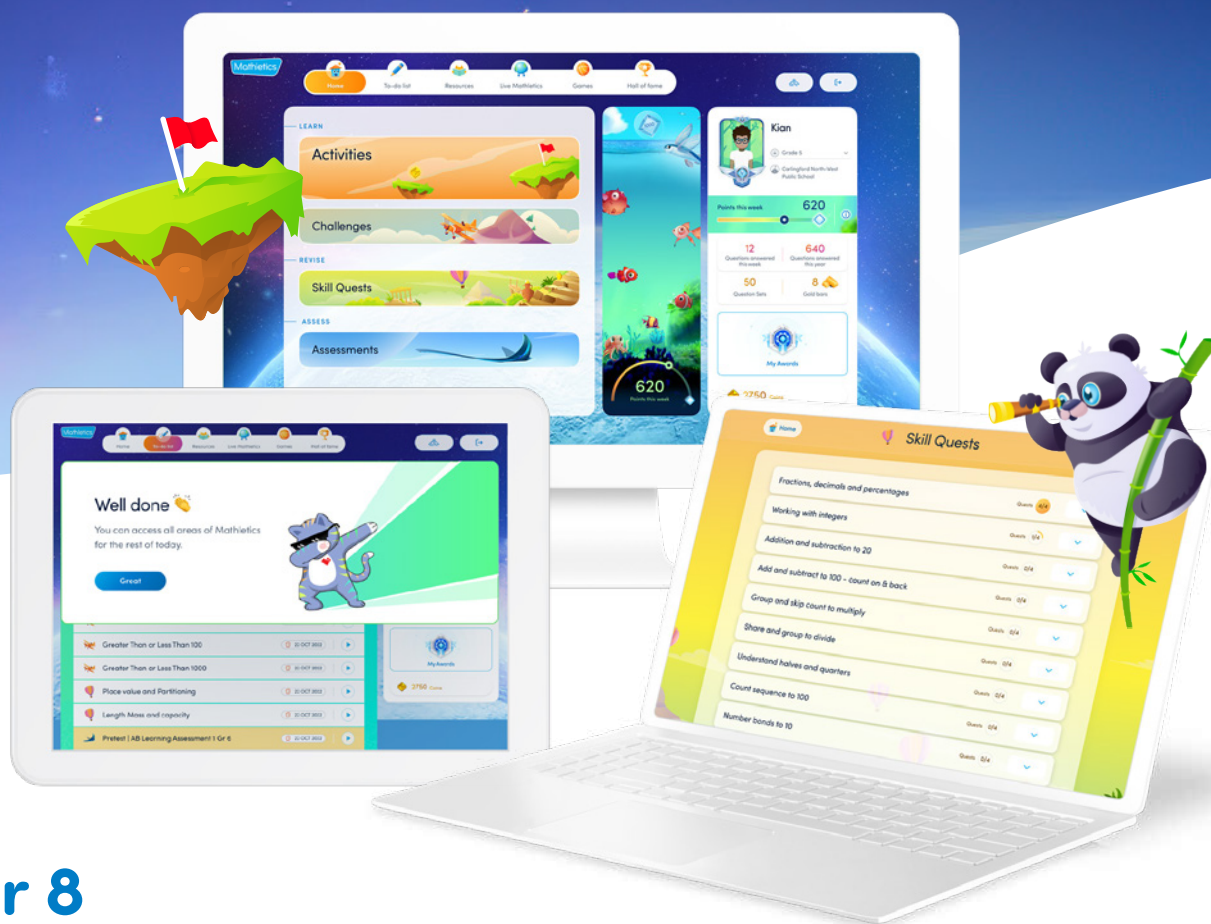


Mathletics

New Zealand Curriculum Mathematics and Statistics (2026)

Scope & Sequence



Phase 3, Year 8

Mathletics

Term one			
Week 1	Number	Number structures and operations	Place value review Rounding
Week 2			Exponents Square and cube numbers
Week 3			Powers of 10 + -
Week 4			Prime and composite/prime factorisation
Week 5			Multiplication and division
Week 6	Geometry	Shape Spatial reasoning	Angle in polygons
Week 7	Number	Number structures and operations	Fractions review
Week 8			Decimal place value and + - review
Week 9			Multiply fractions

Term two			
Week 1	Number	Number structures and operations	Fractions of amounts
Week 2			Decimals x
Week 3			Fractions and percentages
Week 4			FDP
Week 5			Percentages of amounts
Week 6		Financial maths	Money and plans
Week 7		Number structures and operations	Proportional reasoning/ratio
Week 8	Probability	Experimental probability	Probability experiments
Week 9			Probability

Term three			
Week 1	Number	Number structures and operations	Integers
Week 2			Integers + - Order of operations
Week 3	Algebra	Equations and relationships	Algebraic expressions and substitution
Week 4			Linear equations
Week 5			Linear inequalities
Week 6			Linear relationships and patterns
Week 7			Relationships and patterns
Week 8	Measurement	Measuring	Estimate and measure/metric units
Week 9			Perimeter and area review

Term four			
Week 1	Measurement	Measuring	Area
Week 2			Volume
Week 3	Statistics	Developing knowledge from data Visualisation of data Interpretation of data	Developing knowledge from data
Week 4			Data visualisation and interpretation
Week 5			Data visualisation and interpretation
Week 6	Geometry	Pathways	Maps and position
Week 7		Shape	Circles
Week 8		Spatial reasoning	Transformations
Week 9	Measurement	Measuring	Time and timetables Review

Number	TERM & WEEK
Number structures and operations	
Reading, writing comparing, and ordering whole numbers and decimals using positive and negative powers of 10	T1 W3
Representing whole numbers and decimals in expanded form using powers of 10 (e.g. $3.61 = 3 \times 10^0 + 6 \times 10^{-1} + 1 \times 10^{-2}$)	T1 W3
Representing negative powers of 10 as a fraction and a decimal, and vice-versa (e.g. $0.01 = 1/100 = 10^{-2}$)	T1 W3
Using exponents and identifying cube roots for cube numbers up to at least 125	T1 W2
Using radicals ($\sqrt{\quad}$ and $\sqrt[3]{\quad}$) to represent square and cube roots	T1 W2
Evaluating square and cube roots for perfect squares and cubes and using a calculator to approximate them for other numbers	T1 W2
Representing composite numbers as products of their prime factors, using exponents to summarise repeated factors (e.g. $36 = 2 \times 2 \times 3 \times 3 = 2^2 \times 3^2$)	T1 W4
Locating negative and positive numbers on a number line	T3 W1
Comparing and ordering negative and positive numbers using a number line (e.g. $-3.4 < -3$)	T3 W1
Evaluating expressions involving negative numbers, addition, and subtraction (e.g. $3+ -7$)	T3 W2
Using rounding, estimation, and benchmarks to predict results and to check the reasonableness of calculations (e.g. 14.7×5 must be between $14 \times 5 = 70$ and $15 \times 5 = 75$)	T1 W5
Rounding whole numbers to any specified power of 10, and rounding decimals to the nearest whole number, tenth, hundredth, or thousandth	T1 W1
Multiplying and dividing whole numbers (e.g. $327 \div 15 = 21.8$ or $21\frac{4}{5}$)	T1 W5
Evaluating expressions with integers, using the order of operations	T3 W2
Identifying, reading, writing, and representing fractions, decimals, and percentages	T1 W1, 7, 8 T2 W3, 4
Comparing, ordering, and converting between fractions, decimals, and percentages	T1 W7 T2 W4
Multiplying whole numbers by fractions, including by improper fractions, by mixed numbers, and by first converting to an improper fraction	T1 W9
Multiplying fractions and representing the answer in its simplest form	T1 W9
Multiplying and dividing numbers by powers of 10	T1 W8
Multiplying positive decimals (e.g. 2.3×45)	T2 W2
Finding a fraction of a whole number, including when the result is a mixed number or improper fraction (e.g. for $\frac{2}{5}$ of 42, $\frac{2}{5} \times 42 = \frac{84}{5} = 16\frac{4}{5}$)	T2 W1
Finding a whole amount when given a fraction, including when the whole set is a mixed number or improper fraction (e.g. if 8 is $\frac{2}{5}$ of a set, $8 \times \frac{5}{2} = 13\frac{1}{3}$)	T2 W1
Finding percentages of whole numbers	T2 W5
Finding the whole (100%) when given a percentage (e.g. 3% is 27)	T2 W5
Identifying percentage equivalence in calculations (e.g. 45% of 20 is equal to 20% of 45)	T2 W5
Dividing a quantity into two parts, given the part:part or part:whole ratio	T2 W7
Expressing the division of quantity into two parts as a ratio	T2 W7
Financial mathematics	
Creating and comparing weekly, monthly, and yearly finance plans (e.g. for saving plans, phone plans, budgets, and 'buy now, pay later' services)	T2 W6
Applying percentage discounts (e.g. a 35% discount on \$180 will give a new price of $\$180 - (0.35 \times \$180) = \$117$)	T2 W6

Algebra	TERM & WEEK
Equations and relationships	
Forming and solving linear equations with rational solutions (e.g. $t+7=6.5$, $5s+9=-18$)	T3 W4, 6
Forming and solving linear inequalities and representing the solution on a number line (e.g. $t-3 \geq -5$)	T3 W5
Using substitution to find the value of an expression or formula (e.g. calculating $w + 12$ given $w = 4$)	T3 W3, 4
Rearranging known formulae using one or two steps	T3 W3, 4
Simplifying algebraic expressions involving sums, products, differences, and single brackets, and collecting like terms (e.g. $2(x+3) + 1 = 2x+6+1 = 2x+7$)	T3 W3
Factorising simple algebraic expressions (e.g. $5x-35=5(x-7)$)	T3 W3
Identifying and plotting points in the four quadrants of the coordinate plane, using ordered pairs and values from a tables	T3 W6, 7
Using tables, graphs in the coordinate plane, and diagrams to recognise the relationship between the ordinal position and its corresponding element in a linear pattern, develop a rule for the pattern in words, and make conjectures about further elements in the pattern	T3 W6
Identifying the constant increase or decrease in a linear pattern, using variables and algebraic notation to represent the rule in an equation, and using the equation to make conjectures	T3 W6
Investigating the patterns of triangular numbers, square numbers, and cube numbers, extending the patterns, creating tables of values, and plotting the values on the coordinate plane	T3 W7

Measurement

Measuring

Estimating and measuring length, area, volume, capacity, mass (weight), temperature, time, and angle, using appropriate units	T3 W8
Converting between metric units of area (mm^2 , cm^2 , m^2 , and km^2) and volume (mm^3 , cm^3 and m^3)	T3 W8 T4 W2
Converting between different volume units (cm^3 , m^3 , mL, L)	T4 W2
Calculating the area of a parallelogram and a trapezium	T4 W1
Calculating the area of a shape, given some lengths and its perimeter, and vice versa	T3 W9 T4 W1
Calculating lengths of quadrilaterals, given their area and other sufficient information	T4 W1
Calculating the volume of triangular prisms	T4 W2
Calculating the volume of composite figures made up of cubes, rectangular prisms, and/or triangular prisms	T4 W2
Reading, interpreting, and using timetables, charts and results that present information about duration.	T4 W9
Converting times to a given unit (e.g. hours and minutes to minutes)	T4 W9

Geometry	TERM & WEEK
Shape	
Identifying and describing the parts of a circle: the radius, diameter, and circumference	T4 W7
Spatial reasoning	
Transforming 2D shapes on the coordinate plane, including composite shapes, by a combination of translations, reflections, rotations, and scaling by any factor	T4 W8
Proving that the interior angle sum of a triangle is 180° , and generalising a rule for the interior angle sum and exterior angles for any polygon	T1 W6
Reasoning about unknown angles in situations involving internal and external angles of polygons	T1 W6
Pathways	
Using map scales, compass points, distance, and turn to interpret and communicate positions and pathways in coordinate systems and grid reference systems	T4 W6

Statistics	
Developing knowledge from data	
Planning and collecting data in order to respond to a statistical question (e.g. Are our feet the same length?)	T4 W3
Calculating the mean, median, and mode for numerical data	T4 W3
Calculating the range for numerical data	T4 W3
Visualisation of data	
For a given set of data, choosing and constructing an appropriate data visualisation according to the data type (e.g. a dot plot, bar graph, time-series graph)	T4 W5
Noticing and explaining outliers in a given set of data	T4 W3, 4
Interpretation of data	
Responding to statistical questions by calculating an appropriate measure of central tendency and range for a variety of data tables and data visualisations	T4 W3, 4
Interpreting data visualisations, including those from contemporary media	T4 W4
Identifying when a data visualisation cannot be interpreted accurately due to missing information	T4 W4
Identifying outliers by eye and taking them into account when using range as a measure of spread	T4 W3

Probability	TERM & WEEK
Experimental probability	
Carrying out a chance experiment and calculating the experimental probability of each outcome	T2 W8
Comparing experimental probability (using at least 30 trials) to theoretical probability, and explaining why they differ and how increasing the number of trials reduces this difference	T2 W8, 9
Carrying out chance experiments of at least 100 trials and comparing the experimental probability of each individual outcome to its theoretical probability, in order to demonstrate the Law of Large Numbers	T2 W8
Theoretical probability	
Calculating probabilities for events as decimals, fractions, and percentages	T2 W9
Comparing the likelihood of different events	T2 W9
Calculating probabilities for complementary events	T2 W9

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence			Ebook pages	
1 Place value review Rounding Identifying, reading, writing, and representing fractions, decimals, and percentages Rounding whole numbers to any specified power of 10, and rounding decimals to the nearest whole number, tenth, hundredth, or thousandth	A Number structure • Comparing Numbers	SQ Rounding whole numbers & decimals • Rounding whole numbers	A Rational numbers: Decimals • Rounding decimals (something easier) • Decimals on a Number Line (something easier) • Decimal Order	Y8-H Whole Numbers • Topic 3 (pp 1–5) Y8-H Decimal Fractions • Approximations (pp 5–7) • Decimals fractions on the number line (pp 8–9)	
2 Exponents Square and cube numbers Using exponents and identifying cube roots for cube numbers up to at least 125 Using radicals (√ and ∛) to represent square and cube roots Evaluating square and cube roots for perfect squares and cubes and using a calculator to approximate them for other numbers	A Number structure • Square Roots 1	SQ Cube roots for cube numbers • Cube roots for cube numbers	SQ Square & cube roots • Square & cube roots	A Number structure • Estimating Square Roots • Estimating Cube Roots	Y8-H Whole Numbers • Topic 3 (pp 32–36)
3 Powers of 10 + - Reading, writing comparing, and ordering whole numbers and decimals using positive and negative powers of 10 Representing whole numbers and decimals in expanded form using powers of 10 (e.g. 3.61 = 3 × 10¹ + 6 × 10⁻¹ + 1 × 10⁻²) Representing negative powers of 10 as a fraction and a decimal, and vice-versa (e.g. 0.01 = 1/100 = 10⁻²)	SQ Write numbers using powers of 10 • Writing numbers using powers of 10	SQ Represent numbers in expanded form • Representing numbers in expanded form	A Number structure • Scientific Notation • Scientific Notation 2 • Ordering scientific notation	Y7-G Reading and Understanding Whole Numbers • Read and understand numbers (pp 2–4) Y8-H Decimal Fractions • Topic 1 (pp 2– 4, 10– 12)	
4 Prime and composite/prime factorisation Representing composite numbers as products of their prime factors, using exponents to summarise repeated factors (e.g. 36 = 2 × 2 × 3 × 3 = 2² × 3²)	A Number structure • Highest Common Factors (Something Easier) • Lowest Common Multiple (Something Easier) • Prime factorisation with Indices	SQ Products of prime factors • Products of prime factors	C Number & Algebra: Number theory LEVEL 7 -9 • Primes and semiprimes	Y8-H Whole Numbers • Topic 3 (pp 37–42)	
5 Multiplication and division Using rounding, estimation, and benchmarks to predict results and to check the reasonableness of calculations (e.g. 14.7×5 must be between 14×5 = 70 and 15×5 = 75) Multiplying and dividing whole numbers (e.g. 327 ÷ 15 = 21.8 or 21 ⁴/₅)	A Multiplication & division • Are You Ready? • Mental Methods Multiplication 3 • Rounding numbers for Division • Mental Methods Division 3	SQ Multiply and divide whole numbers • Multiplying whole numbers • Dividing whole numbers			

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence			Ebook pages
	(A) ACTIVITIES (COURSES)	(SQ) SKILL QUESTS	(C) CHALLENGES	
6 Angle in polygons Proving that the interior angle sum of a triangle is 180° , and generalising a rule for the interior angle sum and exterior angles for any polygon Reasoning about unknown angles in situations involving internal and external angles of polygons	(A) Geometry: Shape, space, pathways - Angle Sum of a Triangle - Quadrilaterals: Angle Sum with Equations - Interior Angles	(SQ) Find unknown interior & exterior angles Finding unknown interior angles of a polygon	(A) Geometry: Shape, space & pathways Exterior Angles of a Triangle	(Y8-H) Angles and Polygons - Topic 13 (pp 10–22) (Y8-H) Angles - Topic 10 (pp 2–31)
7 Fractions review Identifying, reading, writing, and representing fractions, decimals, and percentages Comparing, ordering, and converting between fractions, decimals, and percentages	(A) Rational numbers: Fractions - Are You Ready? - The Equivalent Fraction - Fraction Wall Labelling 2 - Converting Mixed and Improper - Comparing Fractions			(Y8-H) Fractions - Topic 5 (pp 2–11, 14–15) (Y8-H) Whole Numbers - Topic 3 (pp 43–44)
8 Decimal place value and + - review Identifying, reading, writing, and representing fractions, decimals, and percentages Multiplying and dividing numbers by powers of 10	(SQ) Represent decimals - Decimal place value - Repeating decimals	(A) Rational numbers: Decimals - Adding Decimals (Something Easier) - Subtracting Decimals (Something Easier)	(SQ) Multiply & divide decimals, powers of 10 - Multiplying decimals by powers of 10 - Dividing decimals by powers of 10	(Y7-G) Fractions, Decimals and Percentages - Fractions of an amount (pp 21–23) - Calculating (pp 33–36, 37–38) (Y8-H) Decimal Fractions - Multiplying and dividing by powers of 10 (pp 10–12) - Adding and subtracting decimal fractions (pp 21–23) - Recurring decimal fractions (pp 28–29)
9 Multiply fractions Multiplying whole numbers by fractions, including by improper fractions, by mixed numbers, and by first converting to an improper fraction Multiplying fractions and representing the answer in its simplest form	(A) Rational numbers: Fractions - Multiply: Whole Number and Fraction - Multiply Fraction by Fraction - Multiply Two Fractions 1	(SQ) Multiply fractions - Multiplying improper fractions - Multiplying mixed numbers		(Y7-G) Fractions, Decimals and Percentages - Fractions of an amount (pp 21–23) - Calculating (pp 31–32)

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence				Ebook pages
	(A) ACTIVITIES (COURSES)	(SQ) SKILL QUESTS	(C) CHALLENGES		
1 Fractions of amounts Finding a fraction of a whole number, including when the result is a mixed number or improper fraction (e.g. for $\frac{2}{5}$ of 42, $\frac{2}{5} \times 42 = \frac{84}{5} = 16\frac{4}{5}$) Finding a whole amount when given a fraction, including when the whole set is a mixed number or improper fraction (e.g. if 8 is $\frac{3}{5}$ of a set, $8 \times \frac{5}{3} = 13\frac{1}{3}$)	(A) Rational numbers: Fractions Fraction of an amount (Something Easier)	(SQ) Fraction of a whole number Fraction of a whole number	(SQ) Find the whole given a fraction Find the whole given a fraction	(C) Number & Algebra: Fractions LEVEL 6–8 Paint pot fractions	(Y7-G) Fractions, Decimals and Percentages - Fractions of an amount (pp 21–22) (Y8-H) Fractions - Fractions of an amount (pp 29–32)
2 Decimals x Multiplying positive decimals (e.g. 2.3×45)	(A) Rational numbers: Decimals - Multiply Decimals 1 - Multiply Decimals: Area Model - Decimal by Decimal	(SQ) Multiply decimals Multiplying decimals	(C) Number & Algebra: Decimals LEVEL 7–9 Sounds about right	(Y7-G) Fractions, Decimals and Percentages - Calculating (pp 39–41) (Y8-H) Decimal Fractions - Multiplying with decimal fractions (pp 24–27, 33–36)	
3 Fractions and Percentages Identifying, reading, writing, and representing fractions, decimals, and percentages	(A) Rational numbers: Percentages - Are You Ready? - Fractions to Percentages (Calculator) - Mixed Numerals to Percentages greater than 100% - Percentage to Fraction	(SQ) Convert between FDP Converting fractions to repeating percentages			(Y8-H) Percentage Basics Proper fractions to percentages (pp 2–5)
4 FDP Identifying, reading, writing, and representing fractions, decimals, and percentages Comparing, ordering, and converting between fractions, decimals, and percentages	(A) Rational numbers: Percentages - Decimals to percentages - Percentages to Decimals	(SQ) Convert between FDP Converting between FDP	(SQ) Compare & order FDP Comparing & ordering FDP		(Y7-G) Fractions, Decimals & Percentages - Decimal fractions - percentages (p17) (Y8-H) Percentage Basics - Decimals and percentages (pp 6–7) - Combo time (pp 8–12)
5 Percentages of amounts Finding percentages of whole numbers Finding the whole (100%) when given a percentage (e.g. 3% is 27) Identifying percentage equivalence in calculations (e.g. 45% of 20 is equal to 20% of 45)	(A) Rational numbers: Percentages - Percentage Word Problems - Percentage of a Quantity - Percentage Composition/What percentage? - Percentage of an amount using Decimals (calculator)	(SQ) Percentages of whole numbers Percentages of whole numbers	(SQ) Find the whole given a percentage Finding the whole given a percentage		(Y7-G) Fractions, Decimals & Percentages - Fractions of an amount (pp 23–24) (Y8-H) Percentage Basics - Percentage of an amount (pp 13–16, 22–26)

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence					Ebook pages
	(A) ACTIVITIES (COURSES)	(SQ) SKILL QUESTS	(C) CHALLENGES			
6 Money and plans Applying percentage discounts (e.g. a 35% discount on \$180 will give a new price of $\\$180 - (0.35 \times \\$180) = \\$117$) Creating and comparing weekly, monthly, and yearly finance plans (e.g. for saving plans, phone plans, budgets, and ‘buy now, pay later’ services)	(SQ) Percentage discounts • Percentage discounts	(SQ) Create simple financial plans • Creating simple financial plans	(C) Number & Algebra: Money LEVEL 6–8 • Clearance warehouse bundles • Discount that car		(Y7-G) Fractions, Decimals and Percentages • Fractions of an amount (pp 25–26)	
7 Proportional reasoning/ratio Dividing a quantity into two parts, given the part:part or part:whole ratio Expressing the division of quantity into two parts as a ratio	(A) Rational numbers: Ratio • Dividing a Quantity in a Ratio	(SQ) Divide a quantity into two parts • Dividing a quantity into two parts	(A) Rational numbers: Ratio • Word Problems: Ratio	(SQ) Division of quantity into 2 parts, ratio • Division of quantity into 2 parts, ratio	(C) Number & Algebra: Rates & Ratio LEVEL 7–9 • Collecting shells	(Y9-I) Rates and Ratios • Ratios (pp 2–4) • Dividing a quantity in a given ratio (pp 18–22)
8 Probability experiments Carrying out a chance experiment and calculating the experimental probability of each outcome Comparing experimental probability (using at least 30 trials) to theoretical probability, and explaining why they differ and how increasing the number of trials reduces this difference Carrying out chance experiments of at least 100 trials and comparing the experimental probability of each individual outcome to its theoretical probability, in order to demonstrate the Law of Large Numbers	(A) Probability: Experimental & theoretical • Simple Probability • Probability scale	(SQ) Calculate experimental probability • Calculating experimental probability	(C) Probability LEVEL 6–8 • Rolling to win		(Y8-H) Chance • Sample space (pp 2–8) • Chance experiments (pp 12–17)	
9 Probability Comparing experimental probability (using at least 30 trials) to theoretical probability, and explaining why they differ and how increasing the number of trials reduces this difference Calculating probabilities for events as decimals, fractions, and percentages Comparing the likelihood of different events Calculating probabilities for complementary events	(SQ) Experimental & theoretical probability • Experimental & theoretical probability	(A) Probability: Experimental & theoretical • Dice and coins	(SQ) Calculate probability, FDP • Calculating probability, FDP	(A) Probability: Experimental & theoretical • Complementary Events	(SQ) Complementary events • Complementary events	(Y8-H) Chance • Equally likely outcomes (pp 9–11) • Theoretical probability (pp 18–25)

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence				Ebook pages
1Integers Locating negative and positive numbers on a number line Comparing and ordering negative and positive numbers using a number line (e.g. $-3.4 < -3$)	A Number structure - Directed numbers (Something Easier) - Integers on a Number Line - Comparing Integers ($<$, $=$, $>$)	SQ Positive & negative numbers, number line Positive & negative numbers, number line	SQ Compare & order rational numbers Comparing & order rational numbers	Y8-H Directed Numbers - Types of numbers (p 2) - Measuring instruments and integers (pp 3–5) - Magnitude and direction of integers (pp 6–7) - Ascending and descending order (pp 8 – 10) - The number line (pp 11–13)	
2Integers + - Order of operations Evaluating expressions involving negative numbers, addition, and subtraction (e.g. $3 + -7$) Evaluating expressions with integers, using the order of operations	A Number structure - Integers: Add and Subtract - Integers: Subtraction - More with Integers	SQ Add & subtract integers Adding & subtracting integers	SQ Order of operations, integers Order of operations, integers	Y8-H Directed Numbers - Addition and subtraction using a number line (pp 14–16) - Addition and subtraction (The mysterious Dr Thermos!) (pp 17–22) Y7-G Patterns and Algebra - Order of operations (pp 34–35)	
3Algebraic expressions and substitution Simplifying algebraic expressions involving sums, products, differences, and single brackets, and collecting like terms (e.g. $2(x+3)+1=2x+6+1=2x+7$) Factorising simple algebraic expressions (e.g. $5x-35=5(x-7)$) Using substitution to find the value of an expression or formula (e.g. calculating $w + 12$ given $w = 4$) Rearranging known formulae using one or two steps	A Algebra: Equations, inequalities, patterns - Like Terms: Add and Subtract - Using the Distributive Property - Factorising	SQ Use substitution expressions Using substitution	SQ Change the subject Changing the subject	Y8-H Algebra Basics - Words and symbols (pp 2–3) - Multiplication (pp 4–5) - Division (pp 6–7) - Mixed simplifying (p 8) - Phrases as algebraic expressions (pp 9–11) - Addition and subtraction (pp 12–13) - Grouping like terms (pp 14–15) - Bringing it all together (pp 19–20)	
4Linear equations Forming and solving linear equations with rational solutions (e.g. $t+7=6.5, 5s+9=-18$) Using substitution to find the value of an expression or formula (e.g. calculating $w + 12$ given $w = 4$) Rearranging known formulae using one or two steps	A Algebra: Equations, inequalities, patterns Solve Equations: Add, Subtract 2	SQ Linear equations, rational numbers Solving 1-step linear equations	A Algebra: Equations, inequalities, patterns - Changing the subject - Solving Simple Equations	SQ Linear equations, rational numbers Solving 2-step linear equations	Y9-I Equations - Keeping things in balance (pp 2–3) - Opposite operations (pp 4–7) - Solving simple equations (pp 8–12)
5Linear inequalities Forming and solving linear inequalities and representing the solution on a number line (e.g. $t-3\geq-5$)	A Algebra: Equations, inequalities, patterns - Inequalities on a Number Line: Mixed Basics - Solve One-Step Inequalities 1 - Solve One-Step Inequalities 2	SQ Linear inequalities, Representing solutions on a number line - Writing an inequality to describe a number line - Writing & solving 1-step linear inequalities		Y9-I Inequalities - Inequality signs (pp 3–4) - Inequalities on the number line (pp 5–7) - Solving one-step inequalities (pp 8–10)	

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence			Ebook pages
6 Linear relationships and patterns Identifying and plotting points in the four quadrants of the coordinate plane, using ordered pairs and values from a tables Forming and solving linear equations with rational solutions (e.g. $t+7=6.5$, $5s+9=-18$) Using tables, graphs in the coordinate plane, and diagrams to recognise the relationship between the ordinal position and its corresponding element in a linear pattern, develop a rule for the pattern in words, and make conjectures about further elements in the pattern Identifying the constant increase or decrease in a linear pattern, using variables and algebraic notation to represent the rule in an equation, and using the equation to make conjectures	A Algebra: Equations, inequalities, patterns - Find the Function Rule - Function Rules and Tables - Graphing from a Table of Values 2 - Determining a Rule for a Line	SQ Linear pattern rules Linear pattern rules	Y8-H Whole Numbers - Topic 3 (pp 45–46) Y8-H Algebra Basics - Number patterns (pp 23–25, 31–34) Y8-H The Number Plane - Dependent and independent variables (pp 13–14) - Fees and charges (pp 15–18) Y9-I Straight Lines - Graphs using tables of values (pp 3–7) - Pattern of movement (pp 8–12) - Intercepts (pp 13–16) - Graphing using intercepts (pp 18–21)	
7 Relationships and patterns Identifying and plotting points in the four quadrants of the coordinate plane, using ordered pairs and values from a tables Investigating the patterns of triangular numbers, square numbers, and cube numbers, extending the patterns, creating tables of values, and plotting the values on the coordinate plane	SQ Triangular, square & cube numbers - Describing triangular numbers - Describing square numbers - Describing cube numbers	C Number & Algebra: Patterns LEVEL 6–8 Pascal’s triangle	Y7-G Patterns and Algebra - Triangular numbers (p 15) - Pascal’s triangle (pp 16–17) Y8-H Special Numbers, Factors and Multiples - Square numbers (p 3) - Triangular numbers (p 4) Y8-H Whole Numbers - Pascal’s triangle (pp 45–49)	
8 Estimate and measure/metric units Estimating and measuring length, area, volume, capacity, mass (weight), temperature, time, and angle, using appropriate units Converting between metric units of area (mm^2, cm^2, m^2, and km^2) and volume (mm^3, cm^3 and m^3)	A Measurement - Converting Units of Area - Converting Volume	SQ Select appropriate units - Selecting appropriate units, length - Selecting appropriate units, volume & capacity - Selecting appropriate units, mass	Y8-H Converting Units - Prefixes (pp 2 - 5) - Changing between units of mass (pp 6–7) - Changing between units of length (pp 8–9) - Area, volume and capacity conversions (pp 10–14) - Changing between units of time (pp 15–16)	
9 Perimeter and area review Calculating the area of a shape, given some lengths and its perimeter, and vice versa	A Measurement - Area: Composite Shapes (Something Easier) - Perimeter Detectives 2 (Something Easier)	SQ Area & perimeter Area & perimeter	C Measurement: Area LEVEL 6–8 Calculations with patterns	Y7-G Length, Perimeter and Area - Perimeter of composite shapes (pp 10–11) - Area (pp 18–20)

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence					Ebook pages
	(A) ACTIVITIES (COURSES)	(SQ) SKILL QUESTS	(C) CHALLENGES			
1 Area Calculating the area of a parallelogram and a trapezium Calculating the area of a shape, given some lengths and its perimeter, and vice versa Calculating lengths of quadrilaterals, given their area and other sufficient information	(A) Measurement • Area: Parallelograms (Metric)	(SQ) Area of a parallelogram & a trapezium • Area of a parallelogram	(SQ) Area of a parallelogram & a trapezium • Area of a trapezium	(A) Measurement • Area: Quadrilaterals	(SQ) Lengths of trapeziums using area • Finding lengths of trapeziums using area	(Y8-H) Area and Perimeter • Area: Triangles (p 11–12) • Area: Parallelograms (pp 13–14) • Area of composite shapes (pp 15–17) • Trapeziums (pp 31–32)
2 Volume Calculating the volume of triangular prisms Calculating the volume of composite figures made up of cubes, rectangular prisms, and/or triangular prisms Converting between metric units of area (mm^2 , cm^2 , m^2 , and km^2) and volume (mm^3 , cm^3 and m^3) Converting between different volume units (cm^3 , m^3 , mL , L)	(A) Measurement • Volume of Triangular prisms	(SQ) Volume of triangular prisms • Volume of triangular prisms	(SQ) Volume of composite figures • Volume of composite figures	(SQ) Convert between units of volume • Converting between units of volume	(C) Measurement: Volume LEVEL 7–9 • Counting cubes and spaces	(Y8-H) Solids • Volume of rectangular prisms (pp 13–15)
3 Developing knowledge from data Calculating the mean, median, and mode for numerical data Calculating the range for numerical data Noticing and explaining outliers in a given set of data Responding to statistical questions by calculating an appropriate measure of central tendency and range for a variety of data tables and data visualisations Identifying outliers by eye and taking them into account when using range as a measure of spread	(A) Statistics: Knowledge • Mean/Mean from frequency table • Median/Median from frequency table • Mode/Mode from frequency table • Data Extremes and Range	(SQ) Outliers • Outliers	(SQ) Appropriate statistical measures • Appropriate statistical measures			(Y8-H) Data for Statistics • Measures of central tendency and range (pp 5–25)
4 Data visualisation and interpretation Interpreting data visualisations, including those from contemporary media Noticing and explaining outliers in a given set of data Responding to statistical questions by calculating an appropriate measure of central tendency and range for a variety of data tables and data visualisations Identifying when a data visualisation cannot be interpreted accurately due to missing information	(A) Statistics: Visualisation & interpretation • Sector Graph Angles • Sector Graph Calculations • Divided Bar Graphs • Frequency Histograms	(SQ) Interpret data visualisations • Interpreting line graphs	(SQ) Misleading information • Misleading information			(Y7-G) Data Representation • Types of graphs (pp 3–4, 7–13, 32–34)
5 Data visualisation and interpretation For a given set of data, choosing and constructing an appropriate data visualisation according to the data type (e.g. a dot plot, bar graph, time-series graph)	(A) Statistics: Visualisation & interpretation • Creating a Sector Graph	(SQ) Choose & construct data visualisations • Choosing data visualisations • Constructing dot plots • Constructing line plots • Constructing clustered bar graphs				(Y7-G) Data Representation • Types of graphs (pp5, 14–16)

Focus and practice statements	Online activities: Curated content in a suggested teaching sequence					Ebook pages
	(A) ACTIVITIES (COURSES)	(SQ) SKILL QUESTS	(C) CHALLENGES			
6 Maps and position Using map scales, compass points, distance, and turn to interpret and communicate positions and pathways in coordinate systems and grid reference systems	(A) Geometry: Shape, space & pathways • More Directions!	(SQ) Positions & pathways • Location using compass points	(A) Geometry: Shape, space & pathways • Scale	(SQ) Positions & pathways • Using map scales	(C) Geometry: Symmetry, Transformation & Location LEVEL 6–8 • Calculating coordinates	(Y7-G) Position • Spatial orientation (pp 3–5) • Coordinates (pp 8–12) • Maps and scale (13–14) (Y7-G) Length, Perimeter and Area • Scale and distance (pp 26–29) (Y8-H) The Number Plane • Interesting applications (p 25)
7 Circles Identifying and describing the parts of a circle: the radius, diameter, and circumference	(A) Geometry: Shape, space & pathways • Identify Parts of Circles 1 • Identify Parts of Circles 2		(SQ) Parts of a circle • Parts of a circle			(Y9-I) Circles and Cylinders • Topic 1 (pp 1–2)
8 Transformations Transforming 2D shapes on the coordinate plane, including composite shapes, by a combination of translations, reflections, rotations, and scaling by any factor	(A) Geometry: Shape, space & pathways • Vertical and horizontal shift • Transformations: Coordinate Plane • Rotations: Coordinate Plane		(SQ) Combinations of transformations • Combinations of transformations • Introducing scaling by a factor			(Y8-H) Polygons • Transformations (pp 6–10) • Transformations on the Cartesian number plane (pp 25–30)
9 Time and timetables Review Reading, interpreting, and using timetables, charts and results that present information about duration Converting times to a given unit (e.g. hours and minutes to minutes)	(A) Measurement • Time Zones	(SQ) Timetables • Timetables	(A) Measurement • Time Conversions: Simple Decimals • Hours and Minutes	(A) Convert time • Converting time	(Y8-H) Time Calculations • Units of time (pp 2–6) • Decimal time periods (pp 7–9) • 24-hour time (pp 12–13) • Time duration (14–19) • Timetables (pp 20–24)	

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