August 2023

Course Mapping Guide
International Mathematics
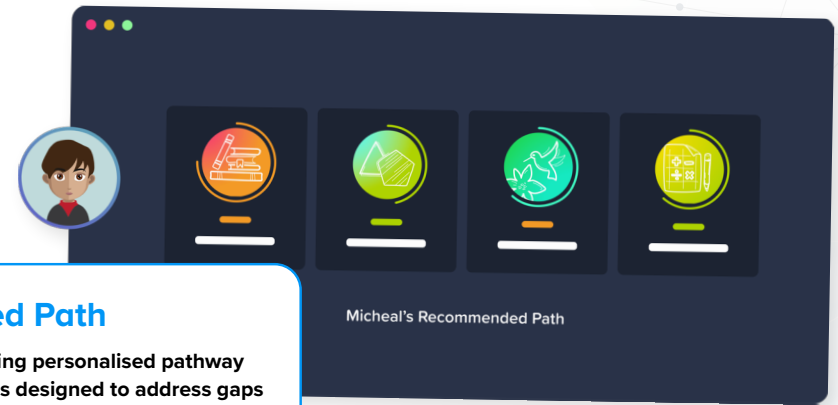
CENTURY

About **CENTURY**

CENTURY is a learning platform that uses artificial intelligence to personalise learning for every learner. Our team of experienced teachers have created all of our content for English, maths, science, geography and physical education from years 2 to 11, as well as functional skills content for post-16 learners. All courses are aligned to the national curriculum and national standards.

- ✓ Learning materials and questions for primary, secondary and post-16 learners

- ✓ Tailored to each learner's skills and knowledge

- ✓ Powered by the world's leading adaptive learning platform

- ✓ Web-based learning for tablets, laptops and desktops

How does **CENTURY** work?

Micheal's Recommended Path

Diagnostics

Learners begin by completing diagnostics that quickly identify knowledge gaps and misconceptions, and help CENTURY recommend the best learning materials for each individual learner.

Recommended Path

This constantly adapting personalised pathway contains micro-lessons designed to address gaps in knowledge, provide stretch and challenge and promote long-term memory retention.

Leadership Dashboard

Senior and middle leaders get an overview of performance and engagement on a subject, class and learner level.

Achievements

Learners get rewarded with badges and streaks for completing micro-lessons or for using CENTURY over a certain period of time to increase their motivation and engagement.

Automated Marking

Teachers can view data in real time, to help quickly identify which learners require additional support or further stretch.
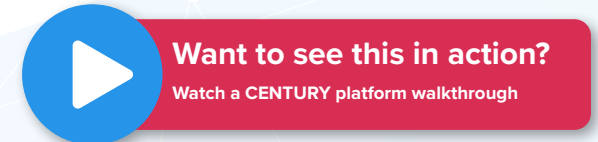
Teacher Dashboard

Use the markbook to monitor individual learners and whole-class trends with a range of dashboards.

Learner Dashboard & Guardian Portal

Learners can identify their strengths and areas for improvement. Parents and guardians can monitor their learner's progress, completed work, and see work set.

Teacher Dashboard

Overview   Markbook   Nuggets   Assignments   Interventions

International Mathematics Course Mapping

Want to see this in action?
Watch a CENTURY platform walkthrough

Course Overview
International Mathematics

Year Group		2	3	4	5	6	7	8	9	10	11	Further Education
					Primary				**Secondary**			
Age		6–7	7–8	8–9	9–10	10–11	11–12	12–13	13–14	14–15	15–16	16+

- Year 2
- Cambridge Stage 2
- Year 3
- Cambridge Stage 3
- Year 4
- Cambridge Stage 4
- Year 3
- Cambridge Stage 5
- Year 6
- Cambridge Stage 6
- Secondary (F+)
- Secondary (F)
- Secondary (H)
- IGCSE: Cambridge (Core)
- IGCSE: Cambridge (Extended)
- Multiplication Tables
- IGCSE: Edexcel (F)
- Year 5&6 Arithemtic
- IGCSE: Edexcel (H)
- 11+ Maths
- Bridge to A-Level
- International Baccalaureate
  - Grade 1 PYP
  - Grade 2 PYP
  - Grade 3 PYP
  - Grade 4 PYP
  - Grade 5 PYP
  - MYP
  - Bridge to DP

International Mathematics Course Mapping

CENTURY

Course List
Primary Mathematics

Our primary mathematics offering includes specific courses for each year group, from years 3 to 6. These courses are mapped to the English National Curriculum.

There is a multiplication tables course, which is suitable for all year groups, and an arithmetic course which is suitable for years 5 and 6.

We also have PYP courses which can be found in the IB section of this document.

To see how our courses map to White Rose Primary Maths, head over to the Customer Hub to download our White Rose guides.

Go to Customer Hub

Year group courses

→ **Primary – Year 2 Mathematics**

Diagnostics 9   **Strands** 10   **Nuggets** 87

Year 2 National Curriculum Map   Year 2 White Rose Map

→ **Primary – Year 3 Mathematics**

Diagnostics 9   **Strands** 11   **Nuggets** 131

Year 3 National Curriculum Map   Year 3 White Rose Map

→ **Primary – Year 4 Mathematics**

Diagnostics 10   **Strands** 12   **Nuggets** 206

Year 4 National Curriculum Map   Year 4 White Rose Map

→ **Primary – Year 5 Mathematics**

Diagnostics 10   **Strands** 12   **Nuggets** 206

Year 5 National Curriculum Map   Year 5 White Rose Map

→ **Primary – Year 6 Mathematics**

Diagnostics 17   **Strands** 18   **Nuggets** 272

Year 6 National Curriculum Map   Year 6 White Rose Map

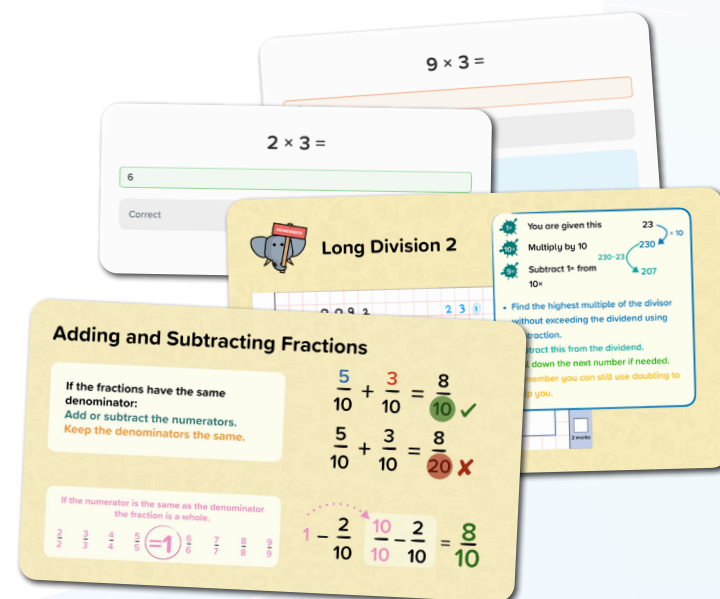### Additional courses

→ **Primary – Multiplication Tables**

Diagnostics 1   **Strands** 6   **Nuggets** 52

View course content

→ **Primary – Year 5-6 Arithmetic**

Diagnostics 8   **Strands** 9   **Nuggets** 60

View course content

International Mathematics Course Mapping   → **View Secondary Content**   → **View IB Content**
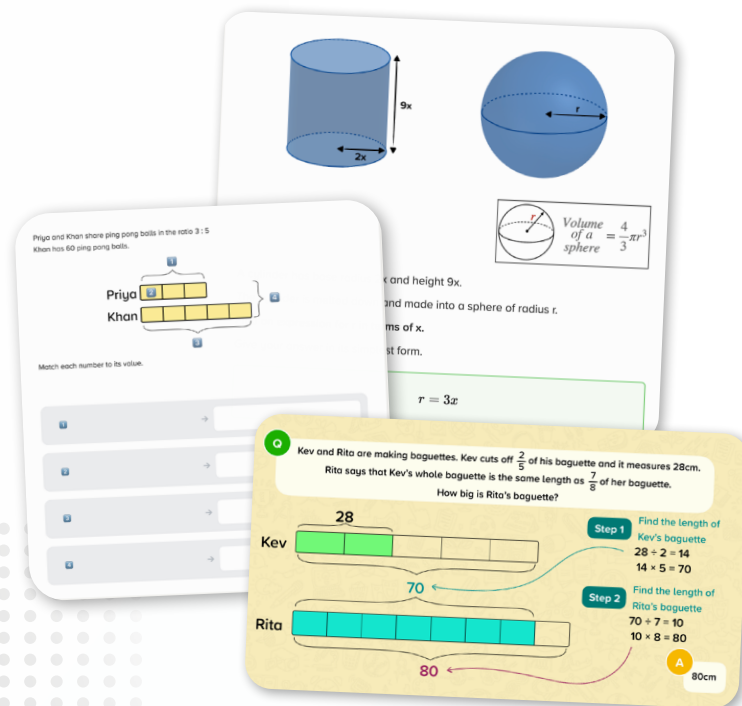
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Course List

Secondary Mathematics

These courses have been created by our team of experienced secondary mathematics teachers.

We have mapped our courses to White Rose Secondary Maths, which can be downloaded through our Customer Hub.

Go to Customer Hub

Secondary Mathematics

→ **Mathematics Secondary (F)**

Diagnostics 81 **Strands** 59 **Nuggets** 675

View Course Content

→ **Mathematics Secondary (H)**

Diagnostics 137 **Strands** 71 **Nuggets** 961

View Course Content

→ **Mathematics Secondary (F+)**

Diagnostics 84 **Strands** 62 **Nuggets** 758

View Course Content

Courses suitable for all GCSE specifications:
Edexcel: 1MA1 (QAN: 601/4700/3)
AQA: 8300 (QAN: 601/4608/4)
OCR: J560 (QAN: 601/4606/0)
Eduqas: C300P (QAN: 601/5503/6)

Bridge to A-Level

→ **Mathematics – Bridge to A-Level**

Diagnostics 10 **Strands** 36 **Nuggets** 433

View Course Content

Advanced Mathematics

Mathematics IGCSE

→ **Mathematics IGCSE: Edexcel (F)**

Diagnostics 81 **Strands** 59 **Nuggets** 658

View Course Content

→ **Mathematics IGCSE: Edexcel (H)**

Diagnostics 131 **Strands** 72 **Nuggets** 929

View Course Content

→ **Mathematics IGCSE: Cambridge (Core) 2024**

Diagnostics 81 **Strands** 59 **Nuggets** 672

View Course Content

→ **Mathematics IGCSE: Cambridge (Extended) 2024**

Diagnostics 138 **Strands** 72 **Nuggets** 991

View Course Content

→ **Mathematics IGCSE: Cambridge (Core) 2025+**

Diagnostics 81 **Strands** 59 **Nuggets** 670

View Course Content

→ **Mathematics IGCSE: Cambridge (Extended) 2025+**

Diagnostics 137 **Strands** 72 **Nuggets** 982

View Course Content

International Mathematics Course Mapping   → **View Primary Content**   → **View IB Content**

CENTURY

Course List
International Baccalaureate Mathematics

Our IB courses provide the mathematic skills, knowledge and practice required for those studying either PYP or MYP.

PYP Mathematics

→ **Primary Mathematics – Grade 1**

Diagnostics 9   **Strands** 10   **Nuggets** 87

View Course Content

→ **Primary Mathematics – Grade 2**

Diagnostics 9   **Strands** 12   **Nuggets** 136

View Course Content

→ **Primary Mathematics – Grade 3**

Diagnostics 10   **Strands** 13   **Nuggets** 211

View Course Content

→ **Primary Mathematics – Grade 4**

Diagnostics 14   **Strands** 16   **Nuggets** 212

View Course Content

→ **Primary Mathematics – Grade 5**

Diagnostics 17   **Strands** 19   **Nuggets** 283

View Course Content

MYP & Bridge to DP

→ **Mathematics - MYP**

Diagnostics 2   **Strands** 12   **Nuggets** 816

View Course Content

→ **Mathematics - Bridge to DP**

Diagnostics 10   **Strands** 35   **Nuggets** 433

View Course Content

International Mathematics Course Mapping   → **View Primary Content**   → **View Secondary Content**

CENTURY

National Curriculum Map
Year 2 Mathematics

Course Primary - Year 2 Mathematics

Diagnostics 9 **Strands** 10 **Nuggets** 87

Strands - Primary – Year 2 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets	Strand	No. of nuggets
Diagnostics	9	Measurement	9
Number and Place Value	11	Money	6
Addition and Subtraction	18	Time	6
Multiplication and Division	13	Geometry	6
Fractions	4	Statistics	5

Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

National Curriculum		CENTURY

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Number and Place Value	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	PM10.01	Counting in Multiples of 2
		PM10.02	Counting in Multiples of 3
		PM10.03	Counting in Multiples of 5
	-	PM10.04	Counting in Multiples of 10

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Number and Place Value	recognise the place value of each digit in a two-digit number (tens, ones)	PM1.34	2-Digit: Recognising Place Value
		PM1.35	2-Digit: Representing Numbers
	identify, represent and estimate numbers using different representations, including the number line	PM1.36	Number Lines to 100
	compare and order numbers from 0 up to 100; use <, > and = signs	PM10.15	2-Digit: Comparing Numbers with Greater Than and Less Than Symbols <>
	read and write numbers to at least 100 in numerals and in words	PM10.16	Reading and Writing Numbers to 20
		PM10.17	Reading and Writing Numbers to 100
	use place value and number facts to solve problems		Included in nuggets above
	-	PM10.18	Number and Place Value Checkpoint
Addition and Subtraction	solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures		Included in nuggets below
	solve problems with addition and subtraction applying their increasing knowledge of mental and written methods		
	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	PM2.30	Number Bonds to 20
		PM2.31	Number Bonds to 100
	add numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers	PM10.11	Single Digit Addition
		PM10.13	Single Digit Subtraction
	subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers	PM2.32	Adding Three 1-Digit Numbers
	subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers	PM2.33	2-Digit: Adding and Subtracting 1s (Not Crossing 10)
		PM1.38	2-Digit: Finding 10 More or 10 Less

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition and Subtraction		PM2.34	2-Digit: Adding and Subtracting Multiples of 10
		PM2.35	2-Digit: Adding 1 Digit Numbers (Crossing 10)
	add numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers	PM2.36	2-Digit: Subtracting 1 Digit Numbers (Crossing 10)
	subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers	PM2.37	2-Digit: Adding 2 Digit Numbers (No Exchanging)
	subtrating numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers	PM2.38	2-Digit: Subtracting 2 Digit Numbers (No Exchanging)
		PM2.39	2-Digit: Adding 2 Digit Numbers (With Exchanging)
		PM2.40	2-Digit: Subtracting 2 Digit Numbers (With Exchanging)
	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	PM2.42	Commutativity in Addition
	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	PM2.41	Addition and Subtraction Fact Families
		PM2.43	2-Digit: Solving Missing Number Problems Using Fact Families
	-	PM2.44	Addition and Subtraction Checkpoint
Multiplication and Division		PM3.63	Understanding Multiplication
		PM10.05	Multiplying by 2
	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables	PM10.06	Multiplying by 5
		PM10.07	Multiplying by 10
		PM3.66	Mixed Multiplication 1 (2s,5s & 10s)

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Multiplication and Division	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables	PM3.67	Commutativity in Multiplication
		PM10.08	Dividing by 2
		PM10.09	Dividing by 5
		PM10.10	Dividing by 10
		PM3.68	Mixed Division 1 (2s, 5s & 10s)
	recognising odd and even numbers	PM3.62	Odd and Even Numbers
	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs		Included in nuggets above
	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	PM3.69	Multiplication and Division Fact Families
	-	PM3.70	Multiplication and Division Checkpoint
Fractions	recognise, find, name and write fractions 1/3 1/4 2/4 and 3/4 of a length, shape, set of objects or quantity	PM4.37	Recognising and Finding a Half
	write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	PM4.38	Recognising and Finding Quarters
		PM4.39	Recognising and Finding Thirds
	-	PM4.42	Fractions Checkpoint
Measurements	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	PM5.31	2-Digit: Measuring in Centimetres
		PM5.32	2-Digit: Solving Problems with Length and Height
		PM5.33	2-Digit: Measuring Mass in Grams

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurements	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	PM5.34	2-Digit: Measuring Mass in Kilograms
		PM5.35	2-Digit: Solving Problems with Mass
		PM5.36	2-Digit: Measuring Volume and Capacity
		PM5.37	2-Digit: Solving Problems with Volume and Capacity
		PM5.38	Measuring Temperature
	compare and order lengths, mass, volume/capacity and record the results using >, < and =		Included in nuggets above
	-	PM5.39	Measurement Checkpoint
Money	recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	PM6.11	Counting Money (Pence)
		PM6.12	Counting Money (Pounds)
	find different combinations of coins that equal the same amounts of money	PM6.16	Making the Same Amount
	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	PM6.15	Making Amounts (Pounds and Pence)
		PM6.14	Finding Change 1 (from £1)
	-	PM6.17	Money Checkpoint
Time	compare and sequence intervals of time	PM7.10	Estimating Time
		PM7.18	Comparing Durations of Time
	tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times	PM7.04	Telling the Time to the Nearest 5 Minutes

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Time	tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times	PM7.05	Telling the Time to the Nearest 5 Minutes in Words
	know the number of minutes in an hour and the number of hours in a day	PM7.19	Units of Time 1
	-	PM7.20	Time Checkpoint
Geometry	identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line	PM8.01	Describing 2D Shapes
	identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	PM8.02	Describing 3D Shapes
	identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]		Included in nugget above
	order and arrange combinations of mathematical objects in patterns and sequences	PM8.08	Patterns and Sequences
	use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)	PM8.09	Describing Position and Movement
		PM8.04	Angles in Turns
	-	PM7.20	Geometry Checkpoint
Statistics	interpret and construct simple pictograms, tally charts, block diagrams and simple tables	PM9.16	Tally Charts
		PM9.14	Block Diagrams
	ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	PM9.01	Pictograms
	ask and answer questions about totalling and comparing categorical data	PM9.20	Tables 1
	-	PM9.21	Statistics Checkpoint

National Curriculum Map
Year 3 Mathematics

Course Primary - Year 3 Mathematics

Diagnostics 9   **Strands** 11   **Nuggets** 131

Strands - Primary – Year 3 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets	Strand	No. of nuggets
Diagnostics	9	Money	10
Number and Place Value	20	Time	12
Addition and Subtraction	26	Geometry	7
Multiplication and Division	28	Statistics	5
Fractions	12	End of Year Assessments	2
Measurement	9		

Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

National Curriculum		CENTURY	
Topic	**National Curriculum Statement**	**Nugget Code**	**Nugget Name**
Number and Place Value	count from 0 in multiples of 4, 8, 50 and 100	PM1.01	Counting in Multiples of 4
		PM1.02	Counting in Multiples of 8
		PM1.03	Counting in Multiples of 50
		PM1.04	Counting in Multiples of 100

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Number and Place Value	recognise the place value of each digit in a 3-digit number (100s, 10s, 1s)	PM1.05	3- Digit: Recognising Place Value
	identify, represent and estimate numbers using different representations	PM1.06	3-Digit: Representing Numbers up to 1000
	find 10 more or 10 less than a given number	PM1.07	3-Digit: Finding 10 More or 10 Less
	find 100 more or 100 less than a given number	PM1.08	Finding 100 More or 100 Less
	compare and order numbers up to 1,000	PM1.09	Comparing Numbers with Greater Than and Less Than Symbols <>
	compare and order numbers up to 1,001	PM1.10	Ordering Numbers Up to 1000
	read and write numbers up to 1,000 in numerals and in words	PM1.11	Reading and Writing Numbers up to 1000
Addition and Subtraction	add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s	PM2.01	3-Digit: Adding and Subtracting 1s
		PM2.02	3-Digit: Adding and Subtracting 10s
		PM2.03	3-Digit: Adding and Subtracting 100s
	add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction	PM2.04	3-Digit: Column Addition (no Exchanging)
		PM2.05	3-Digit: Column Addition (with Exchanging)
		PM2.06	3-Digit: Column Subtraction (no Exchanging)
		PM2.07	3-Digit: Column Subtraction (with Exchanging)
		PM2.08	3-Digit: Addition and Subtraction Practice 1
		PM2.09	3-Digit: Addition and Subtraction Word Problems 1
	estimate the answer to a calculation and use inverse operations to check answers	PM2.10	3-Digit: Rounding to the Nearest 10 and 100

International Mathematics Course Mapping
Year 3 Mathematics National Curriculum Map

CENTURY

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition and Subtraction	estimate the answer to a calculation and use inverse operations to check answers	PM2.11	Estimating Using Rounding
		PM2.12	Checking Answers Using the Inverse 1
Multiplication and Division	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	PM3.01	Multiplying by 3
		PM3.02	Multiplying by 4
		PM3.03	Multiplying by 8
		PM3.04	Mixed Multiplication
		PM3.05	Dividing by 3
		PM3.06	Dividing by 4
		PM3.07	Dividing by 8
		PM3.08	Mixed Division
	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two digit numbers times one-digit numbers, using mental and progressing to formal written methods	PM3.09	Multiplying Multiples of 10
		PM3.10	Multiplying Using Partitioning
		PM3.11	Multiplying Using the Grid Method
		PM3.12	Short Multiplication
		PM3.13	Short Division 1 (No Remainders)
		PM3.14	Short Division 2 (with Remainders)
		PM3.15	Multiplication and Division Practice 1

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Multiplication and Division	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two digit numbers times one-digit numbers, using mental and progressing to formal written methods	PM3.16	Multiplication and Division Word Problems 1
		PM3.60	2- Digit: Dividing Using Partitioning (No Remainders)
		PM3.61	2- Digit: Dividing Using Partitioning (With Remainders)
Fractions	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	PM4.01	Identifying Fractions
	count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10	PM4.02	Tenths
	compare and order unit fractions, and fractions with the same denominators	PM4.03	Comparing and Ordering Fractions
	add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]	PM4.04	Adding and Subtracting Fractions
	recognise and show, using diagrams, equivalent fractions with small denominators	PM4.05	Equivalent Fractions
	recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	PM4.06	Finding Unit Fractions of Amounts
		PM4.07	Finding Non-Unit Fractions of Amounts
	recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	PM4.08	Finding Fractions of Amounts
Measurement	measure, compare, add and subtract: lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml)	PM5.01	Units of Measure
		PM5.02	Length
		PM5.03	Solving Length Problems
		PM5.04	Mass and Weight
		PM5.05	Solving Mass Problems
		PM5.06	Volume and Capacity

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurement	measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml)	PM5.07	Solving Volume and Capacity Problems
	measure the perimeter of simple 2-D shapes	PM5.08	Perimeter by Counting
		PM5.09	Calculating the Perimeter
Money	pupils continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using manageable amounts. They record £ and p separately.	PM6.01	Adding Amounts of Money
		PM6.02	Adding Amounts of Money 2
		PM6.05	Solving Money Problems 1
	add and subtract amounts of money to give change, using both £ and p in practical contexts	PM6.03	Finding Change 2
		PM6.04	Subtracting Amounts of Money
		PM6.14	Finding Change 1 (from £1)
Time	know the number of seconds in a minute and the number of days in each month, year and leap year	PM7.01	Units of Time
	estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	PM7.02	Times of Day
		PM7.03	Telling the Time in Words
		PM7.04	Telling the Time to the Nearest 5 Minutes
		PM7.05	Telling the Time to the Nearest 5 Minutes in Words
		PM7.06	Telling the Time to the Nearest Minute
		PM7.07	Roman Numerals (up to 20)
		PM7.08	Telling the Time with Roman Numerals

International Mathematics Course Mapping
Year 3 Mathematics National Curriculum Map

CENTURY

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Time	estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	PM7.09	12 Hour and 24 Hour Clocks
		PM7.10	Estimating Time
	compare durations of events [for example, to calculate the time taken by particular events or tasks]	PM7.11	Finding the Duration
		PM7.12	Start and End Times
Geometry	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	PM8.01	Describing 2D Shapes
		PM8.02	Describing 3D Shapes
		PM8.03	Nets of Shapes
	recognise angles as a property of shape or a description of a turn	PM8.04	Angles in Turns
	identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle	PM8.05	Identifying Angles
	identify horizontal and vertical lines and pairs of perpendicular and parallel lines	PM8.06	Identifying Lines
		PM8.07	Lines of Symmetry
Statistics	interpret and present data using bar charts, pictograms and tables	PM9.01	Pictograms
		PM9.02	Tables
		PM9.03	Bar Charts 1

International Mathematics Course Mapping
Year 3 Mathematics National Curriculum Map

CENTURY

National Curriculum Map
Year 4 Mathematics

Course Primary - Year 4 Mathematics

Diagnostics 10   **Strands** 12   **Nuggets** 206

Strands - Primary - Year 4 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets	Strand	No. of nuggets
Diagnostics	10	Time	13
Number and Place Value	28	Money	10
Addition and Subtraction	20	Geometry	13
Multiplication and Division	39	Statistics	7
Fractions and Decimals	16	Catch Up	36
Measurement	20	End of Year Assessments	4

Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

National Curriculum		CENTURY	
Topic	**National Curriculum Statement**	**Nugget Code**	**Nugget Name**
Number and Place Value	count in multiples of 6, 7, 9, 25 and 1,000	PM1.12	Counting in Multiples of 6
		PM1.13	Counting in Multiples of 7
		PM1.02	Counting in Multiples of 8
		PM1.14	Counting in Multiples of 9

International Mathematics Course Mapping
Year 4 Mathematics National Curriculum Map

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Number and Place Value	count in multiples of 6, 7, 9, 25 and 1,000	PM1.15	Counting in Multiples of 25
		PM1.16	Counting in Multiples of 1000
	find 1,000 more or less than a given number	PM1.33	Finding 1000 More or 1000 Less
	count backwards through 0 to include negative numbers	PM1.18	Negative Numbers 1
		PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
	recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)	PM1.20	Place Value in 4 Digit Numbers
	order and compare numbers beyond 1,000	PM1.22	Comparing and Ordering Numbers
	round any number to the nearest 10, 100 or 1,000	PM1.23	Rounding to the Nearest 10, 100 and 1000
	read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value	PM1.24	Roman Numerals (up to 100)
Addition and Subtraction	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	PM2.13	4-Digit: Column Addition (no Exchanging)
		PM2.14	4-Digit: Column Addition (with Exchanging)
		PM2.15	4-Digit: Column Subtraction (no Exchanging)
		PM2.16	4-Digit: Column Subtraction (with Exchanging)
		PM2.17	4-Digit: Addition and Subtraction Practice 2
		PM2.18	4-Digit: Addition and Subtraction Word Problems 2
	estimate and use inverse operations to check answers to a calculation	PM2.19	Checking Answers Using the Inverse 2
		PM2.20	Estimating to Check Answers

International Mathematics Course Mapping
Year 4 Mathematics National Curriculum Map

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Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition and Subtraction	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	PM2.21	Solving Two-Step Problems
Multiplication and Division	recall multiplication and division facts for multiplication tables up to 12 × 12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers	PM10.05	Multiplying by 2
		PM3.01	Multiplying by 3
		PM3.02	Multiplying by 4
		PM10.06	Multiplying by 5
		PM3.17	Multiplying by 6
		PM3.18	Multiplying by 7
		PM3.03	Multiplying by 8
		PM3.19	Multiplying by 9
		PM10.07	Multiplying by 10
		PM3.20	Multiplying by 11
		PM3.21	Multiplying by 12
		PM3.22	Mixed Multiplication (Within the Times Tables)
		PM10.08	Dividing by 2
		PM3.05	Dividing by 3
		PM3.06	Dividing by 4
		PM3.23	Dividing by 6

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Multiplication and Division	recall multiplication and division facts for multiplication tables up to 12 × 12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers	PM10.09	Dividing by 5
		PM3.24	Dividing by 7
		PM3.07	Dividing by 8
		PM3.25	Dividing by 9
		PM10.10	Dividing by 10
		PM3.26	Dividing by 11
		PM3.27	Dividing by 12
		PM3.28	Mixed Division (Within the Times Tables)
		PM3.29	Multiplying 3 Numbers Together
		PM3.64	Comparing Statements
	recognise and use factor pairs and commutativity in mental calculations	PM3.30	Factor Pairs
	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	PM3.09	Multiplying Multiples of 10
		PM3.10	Multiplying Using Partitioning
		PM3.31	2/3-Digit: Multiplying by 1-Digit
	solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	PM3.32	Scaling Problems 2
		PM3.33	Correspondence Problems 1
		PM3.34	Correspondence Problems 2

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Fractions (Including Decimals)	recognise and show, using diagrams, families of common equivalent fractions	PM4.05	Equivalent Fractions 1
	count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10	PM4.09	Hundredths
	solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number	PM4.06	Finding Unit Fractions of Amounts
		PM4.07	Finding Non-Unit Fractions of Amounts
		PM4.08	Finding Fractions of Amounts
	add and subtract fractions with the same denominator	PM4.04	Adding and Subtracting Fractions
	recognise and write decimal equivalents of any number of tenths or hundreds	PM1.21	2dp: Recognising Place Value in Decimals
		PM4.10	Decimal Equivalents (Tenths/Hundredths)
	recognise and write decimal equivalents to quarter, half, three quarters	PM4.11	Decimal Equivalents (Quarter, Half and Three Quarters)
	find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	PM4.12	Dividing and Multiplying by 10 and 100 (Including Decimals)
	round decimals with 1 decimal place to the nearest whole number	PM4.13	Rounding Decimals to the Nearest Whole Number
	compare numbers with the same number of decimal places up to two decimal places	PM4.14	Comparing Decimals
	solve simple measure and money problems involving fractions and decimals to two decimal places	⊕	Covered throughout nuggets in this topic
Measurement	convert between different units of measure [for example, kilometre to metre; hour to minute]	PM5.10	Measuring Length
		PM5.11	Converting mm and cm
		PM5.12	Converting cm and m
		PM5.13	Converting m and km

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurement	convert between different units of measure [for example, kilometre to metre; hour to minute]	PM5.14	Converting Length
		PM7.14	Converting Seconds, Minutes and Hours
	find the area of rectilinear shapes by counting squares	PM5.20	Area by Counting
		PM5.21	Area
	estimate, compare and calculate different measures, including money in pounds and pence	PM5.04	Mass and Weight
		PM5.15	Measuring Mass
		PM5.16	Converting Mass
		PM5.05	Solving Mass Problems
		PM5.06	Volume and Capacity
		PM5.17	Measuring Volume
		PM5.18	Converting Volume
		PM5.07	Solving Volume and Capacity Problems
		PM6.06	Pounds and Pence
		PM6.01	Adding Amounts of Money
		PM6.02	Adding Amounts of Money 2
		PM6.07	Comparing Amounts of Money
		PM6.08	Estimating Amounts of Money

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Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurement	estimate, compare and calculate different measures, including money in pounds and pence	PM6.03	Finding Change 2
		PM6.04	Subtracting Amounts of Money
		PM6.10	Solving Money Problems 2
	read, write and convert time between analogue and digital 12- and 24-hour clocks	PM7.09	12 Hour and 24 Hour Clocks
	solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days	PM7.13	Converting Weeks, Days, Years and Months
Geometry - Properties of Shapes	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	PM8.11	Triangles
		PM8.12	Quadrilaterals
		PM8.13	Sorting Shapes
	identify acute and obtuse angles and compare and order angles up to two right angles by size	PM8.05	Identifying Angles
	Identify lines of symmetry in 2-D shapes presented in different orientations	PM8.07	Lines of Symmetry
	complete a simple symmetric figure with respect to a specific line of symmetry	⊕	Covered throughout nuggets in this topic
Geometry - Position and Direction	describe positions on a 2-D grid as coordinates in the first quadrant	PM8.14	Describing Position
	plot specified points and draw sides to complete a given polygon.	PM8.15	Plotting Points
	describe movements between positions as translations of a given unit to the left/right and up/down	PM8.16	Translation 1
Statistics	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	PM9.01	Pictograms
		PM9.02	Tables 1
		PM9.03	Bar Charts 1
		PM9.04	Line Graphs 1

International Mathematics Course Mapping
Year 4 Mathematics National Curriculum Map

CENTURY

National Curriculum Map
Primary – Year 5

Course Primary - Year 5 Mathematics

Diagnostics 10   **Strands** 12   **Nuggets** 206

Strands - Primary - Year 5 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets	Strand	No. of nuggets
Diagnostics	14	Measurement	23
Number and Place Value	15	Time	13
Addition and Subtraction	14	Area, Perimeter and Volume	10
Multiplication and Division	23	Properties of Shapes	21
Times Tables and Division Facts	24	Position and Direction	4
Mixed operations	7	Statistics	10
Fractions	18	End of Year Assessments	4
Fractions, decimals and percentages	18		

Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

National Curriculum		CENTURY	
Topic	**National Curriculum Statement**	**Nugget Code**	**Nugget Name**
Number and Place Value	read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	PM1.25	Place Value up to 1,000,000
		PM1.26	Comparing and Ordering Numbers to 1,000,000

International Mathematics Course Mapping
Year 5 Mathematics National Curriculum Map

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Number and Place Value	count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	PM1.27	Counting Forwards and Backwards in Powers of 10
	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0	PM1.18	Negative Numbers 1
		PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
	round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	PM1.23	Rounding to the Nearest 10, 100 and 1000
		PM1.28	Rounding to the Nearest 10,000 and 100,000
	solve number problems and practical problems that involve all of the above	-	⬆ Included in Nuggets Above
	read Roman numerals to 1,000 (M) and recognise years written in Roman numerals	PM7.07	Roman Numerals (up to 20)
		PM1.24	Roman Numerals (up to 100)
		PM1.29	Roman Numerals (up to 1000)
		PM1.30	Roman Numerals (Beyond 1000)
Addition and Subtraction	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	PM2.22	4+ Digit: Column Addition
		PM2.23	4+ Digit: Column Subtraction
	add and subtract numbers mentally with increasingly large numbers	PM2.24	Mental Strategies for Addition 1
		PM2.25	Mental Strategies for Addition 2
		PM2.26	Mental Strategies for Subtraction 1
		PM2.27	Mental Strategies for Subtraction 2
	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	PM2.20	Estimating to Check Answers

International Mathematics Course Mapping
Year 5 Mathematics National Curriculum Map

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Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition and Subtraction	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	PM2.21	Solving Two-Step Problems
Multiplication and Division	identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers	PM3.30	Factor Pairs
		PM3.40	Common Factors
	know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	PM3.41	Prime Numbers
	establish whether a number up to 100 is prime and recall prime numbers up to 19	PM3.42	Prime Factors
	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	PM3.50	3/4-Digit: Multiplying by 1-Digit
		PM3.51	2-Digit: Multiplying by 2-Digits
		PM3.52	3/4-Digit: Multiplying by 2-Digits
	multiply and divide numbers mentally, drawing upon known facts	PM3.47	Mental Strategies for Multiplication 1
		PM3.48	Mental Strategies for Multiplication 2
		PM3.49	Mental Strategies for Division
	divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)
		PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
	multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	PM3.45	Multiplying by 10, 100 and 1000 (Involving Decimals up to 3 d.p.)
		PM3.46	Dividing by 10, 100 and 1000 (Involving Decimals Up to 3 d.p.)
	recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	PM3.43	Square Numbers
		PM3.44	Cube Numbers

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Multiplication and Division	solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	PM11.01	Understanding the Equals Sign
		PM11.02	Solving Multistep Problems 1 (with Multiplication)
		PM11.03	Solving Multistep Problems 2 (with Division)
	solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	PM3.32	Scaling Problems 2
		PM11.04	Multistep Scaling Problems
Fractions (Including Decimals and Percentages)	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	PM4.15	Equivalent Fractions 2
	compare and order fractions whose denominators are all multiples of the same number	PM4.16	Comparing Proper Fractions 1
		PM4.18	Comparing and Ordering Improper Fractions and Mixed Numbers
	recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]	PM4.17	Mixed Numbers and Improper Fractions
	add and subtract fractions with the same denominator, and denominators that are multiples of the same number	PM4.04	Adding and Subtracting Fractions
		PM4.27	Adding and Subtracting Fractions with Different Denominators
		PM4.29	Adding and Subtracting Mixed Numbers 1
	multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	PM4.28	Multiplying Fractions by Whole Numbers
		PM4.30	Multiplying Mixed Numbers by Whole Numbers
		PM4.31	Fractions as Operators
	read and write decimal numbers as fractions [for example, 0.71 = 71/100]	PM4.11	Decimal Equivalents (Quarter, Half and Three Quarters)
		PM4.10	Decimal Equivalents (Tenths/Hundredths)

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Fractions (Including Decimals and Percentages)	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	PM12.01	Thousandths
	round decimals with 2 decimal places to the nearest whole number and to 1 decimal place	PM4.13	Rounding Decimals to the Nearest Whole Number
		PM12.03	Rounding Decimals
	read, write, order and compare numbers with up to 3 decimal places	PM12.02	3dp: Recognising Place Value in Decimals
		PM4.14	Comparing Decimals
	solve problems involving number up to 3 decimal places	PM12.14	Adding and Subtracting Decimals (within 1)
		PM12.15	3dp: Decimal Complements to 1
		PM12.04	Adding and Subtracting Decimals
	recognise the percent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction	PM12.05	Introduction to Percentages
	solve problems which require knowing percentage and decimal equivalents of ½ , ¼ , ⅕ , ⅖ , ⅘ and those fractions with a denominator of a multiple of 10 or 25	PM12.06	Fractions, Decimals and Percentages 1
		PM12.07	Finding Percentages 1
		PM12.08	Finding Percentages 2
Measurement	convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]	PM5.11	Converting mm and cm
		PM5.12	Converting cm and m
		PM5.13	Converting m and km
		PM5.14	Converting Length
		PM5.16	Converting Mass

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Measurement	convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]	PM5.18	Converting Volume
		PM5.23	Solving Length Problems with Conversion
		PM5.25	Solving Mass Problems with Conversion
		PM5.27	Solving Volume and Capacity Problems with Conversion
	understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	PM5.22	Imperial Units of Length
		PM5.24	Imperial Units of Mass
		PM5.26	Imperial Units of Volume and Capacity
	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	PM13.01	Calculating the Perimeter 2
	calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes	PM13.02	Area of Rectangles
		PM13.03	Area of Compound Shapes
		PM13.04	Estimating Area
	estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	PM13.06	Volume of Shapes 1
		PM5.28	Estimating Volume and Capacity
	solve problems involving converting between units of time	PM7.13	Converting Weeks, Days, Years and Months
		PM7.14	Converting Seconds, Minutes and Hours
		PM7.15	Converting Units of Time
Geometry – Properties of Shapes	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	PM14.03	Views of 3D Shapes

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Geometry – Properties of Shapes	know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	PM14.05	Identifying Angles 2
		PM14.08	Measuring Angles
		PM14.07	Estimating Angles
	draw given angles, and measure them in degrees (°)	PM14.09	Drawing Angles
	identify angles at a point and 1 whole turn (total 360°)	PM14.12	Angles Around a Point
	identify angles at a point on a straight line and half a turn (total 180°)	PM14.11	Angles on a Straight Line
	identify other multiples of 90°	PM14.04	Angles in Turns 2
	identify use the properties of rectangles to deduce related facts and find missing lengths and angles	PM14.02	Lengths of Right-Angled Shapes
		PM14.06	Angles in Right-Angled Shapes
	identify distinguish between regular and irregular polygons based on reasoning about equal sides and angles	PM14.01	Regular and Irregular Polygons
Geometry – Position and Direction	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	PM8.16	Translation 1
		PM15.01	Reflection 1
Statistics	solve comparison, sum and difference problems using information presented in a line graph	PM9.13	Bar Charts 2
		PM9.08	Line Graphs 2
	complete, read and interpret information in tables, including timetables	PM9.05	Tables 2
		PM9.06	Two-Way Tables
		PM9.07	Timetables

International Mathematics Course Mapping
Year 5 Mathematics National Curriculum Map

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National Curriculum Map
Year 6 Mathematics

Course Primary - Year 6 Mathematics

Diagnostics 17   **Strands** 18   **Nuggets** 272

Strands - Primary - Year 6 Mathematics

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets		Strand	No. of nuggets
Diagnostics	17		Ratio and Proportion	6
Number and Place Value	15		Algebra	11
Addition and Subtraction	16		Measurements	25
Times Tables and Division Facts	24		Time	13
Multiplication and Division	27		Area, Perimeter and Volume	14
Mixed Operations	10		Properties of Shapes	28
Fractions	29		Position and Direction	7
Fractions, Decimals and Percentages	20		Statistics	15
Percentages	8		End of Year 6 Assessments	4

Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

National Curriculum			CENTURY	
Topic	National Curriculum Statement		Nugget Code	Nugget Name
Number and Place Value	read, write, order and compare numbers up to 10,000,000 and determine the value of each digit		PM1.31	Place Value up to 10,000,000
	round any whole number to a required degree of accuracy		PM1.23	Rounding to the Nearest 10, 100 and 1000

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Topic	National Curriculum Statement	Nugget Code	Nugget Name
Number and Place Value	round any whole number to a required degree of accuracy	PM1.28	Rounding to the Nearest 10,000 and 100,000
	use negative numbers in context, and calculate intervals across 0	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
		PM1.32	Negative Numbers 3
	solve number and practical problems that involve all of the above	⊕	Included in Nuggets Above
Addition, Subtraction, Multiplication and Division	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	PM3.51	2-Digit: Multiplying by 2-Digits
		PM3.52	3/4-Digit: Multiplying by 2-Digits
	divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	PM3.57	Long Division 1 (Dividing by a Single Digit Number)
		PM3.58	Long Division 2 (Dividing by a 2 Digit Number)
	divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)
		PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
		PM3.56	Dividing by 2 Digit Numbers Using Short Division
	perform mental calculations, including with mixed operations and large numbers	PM2.24	Mental Strategies for Addition 1
		PM2.25	Mental Strategies for Addition 2
		PM2.26	Mental Strategies for Subtraction 1
		PM2.27	Mental Strategies for Subtraction 2
		PM3.47	Mental Strategies for Multiplication 1
		PM3.48	Mental Strategies for Multiplication 2

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Topic	National Curriculum Statement	Nugget Code	Nugget Name
Addition, Subtraction, Multiplication and Division	perform mental calculations, including with mixed operations and large numbers	PM3.49	Mental Strategies for Division
	identify common factors, common multiples and prime numbers	PM3.40	Common Factors
		PM3.41	Prime Numbers
		PM3.55	Common Multiples
	use their knowledge of the order of operations to carry out calculations involving the 4 operations	PM11.05	Operations of Equal Priority
		PM11.06	BIDMAS: 4 Operations and Brackets
		PM11.07	BIDMAS: Indices
	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	PM2.28	Multistep Addition and Subtraction Problems
		PM11.02	Solving Multistep Problems 1 (with Multiplication)
		PM11.03	Solving Multistep Problems 2 (with Division)
	solve problems involving addition, subtraction, multiplication and division	PM2.22	4+ Digit: Column Addition
		PM2.23	4+ Digit: Column Subtraction
	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy	PM2.20	Estimating to Check Answers
Fractions	use common factors to simplify fractions; use common multiples to express fractions in the same denomination	PM4.23	Simplifying Fractions
	compare and order fractions, including fractions >1	PM4.16	Comparing Proper Fractions 1
		PM4.21	Comparing Proper Fractions 2
		PM4.18	Comparing and Ordering Improper Fractions and Mixed Numbers

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Fractions	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	PM4.27	Adding and Subtracting Fractions with Different Denominators
		PM4.32	Adding and Subtracting Fractions with Different Denominators 2
		PM4.29	Adding and Subtracting Mixed Numbers 1
		PM4.33	Adding and Subtracting Mixed Numbers 2
	multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ × ½ = ⅛]	PM4.24	Multiplying Simple Pairs of Proper Fractions
	divide proper fractions by whole numbers [for example, ⅓ ÷ 2 = ⅙]	PM4.25	Dividing Fractions by Whole Numbers
	associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, ⅜]	PM12.12	Fractions to Decimals Using Division
	identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places	PM12.02	3dp: Recognising Place Value in Decimals
		PM3.45	Multiplying by 10, 100 and 1000 (Involving Decimals up to 3 d.p.)
		PM3.46	Dividing by 10, 100 and 1000 (Involving Decimals Up to 3 d.p.)
	multiply one-digit numbers with up to 2 decimal places by whole numbers	PM12.09	Multiplying Decimals
	use written division methods in cases where the answer has up to 2 decimal places	PM12.10	Dividing Decimals
	solve problems which require answers to be rounded to specified degrees of accuracy	⊕	Included in Nuggets Above
	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	PM12.11	Converting Decimals to Fractions
		PM12.13	Fractions, Decimals and Percentages 2
Ratio and Proportion	solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts	PM17.01	Introduction to Ratio
		PM17.02	Simplifying Ratios

International Mathematics Course Mapping
Year 6 Mathematics National Curriculum Map

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Topic	National Curriculum Statement	Nugget Code	Nugget Name
Ratio and Proportion	solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts	PM17.06	Proportion
	solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison	PM16.01	Finding Percentages of Amounts 1 (1%, 10%, 25%, 50%)
		PM16.02	Finding Percentages of Amounts 2 (2-9%)
		PM16.03	Finding Percentages of Amounts 3 (multiples of 10)
		PM16.04	Finding Percentages of Amounts 4 (11-99%)
		PM16.05	Percentages (Missing Values)
	solve problems involving similar shapes where the scale factor is known or can be found	PM17.05	Similar Shapes
	solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	PM17.03	Ratios and Fractions
		PM17.04	Sharing into a Given Ratio
Algebra	use simple formulae	PM18.02	Function Machines
		PM18.07	Formulae
	generate and describe linear number sequences	PM18.01	Sequences
	express missing number problems algebraically	PM18.03	Forming Expressions 1
		PM18.04	Forming Expressions 2
		PM18.05	Forming Expressions 3
		PM18.06	Substitution
		PM18.08	Solving 1 Step Equations

International Mathematics Course Mapping
Year 6 Mathematics National Curriculum Map

CENTURY

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Algebra	express missing number problems algebraically	PM18.09	Solving 2 Step Equations
	find pairs of numbers that satisfy an equation with 2 unknowns	PM18.10	Satisfying Equations with 2 Variables
	enumerate possibilities of combinations of 2 variables	PM18.11	Enumerating Possibilities
Measurements	solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate	PM5.14	Converting Length
		PM5.16	Converting Mass
		PM5.18	Converting Volume
	use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places	PM5.29	Converting Metric Measures
	convert between miles and kilometres	PM5.30	Converting Miles and Kilometres
	recognise that shapes with the same areas can have different perimeters and vice versa	PM13.05	Area and Perimeter
	recognise when it is possible to use formulae for area and volume of shapes	PM13.02	Area of Rectangles
		PM13.10	Volume of Shapes 2
	calculate the area of parallelograms and triangles	PM13.07	Area of Parallelograms
		PM13.08	Area of Right-Angled Triangles
		PM13.09	Area of Triangles
Properties of Shapes	draw 2-D shapes using given dimensions and angles	PM14.14	Nets of Shapes 2
	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	PM14.16	Angles in Triangles
		PM14.17	Angles in Quadrilaterals

International Mathematics Course Mapping
Year 6 Mathematics National Curriculum Map

CENTURY

Topic	National Curriculum Statement	Nugget Code	Nugget Name
Properties of Shapes	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	PM14.18	Angles in Regular Polygons
	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	PM14.13	Circles
	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	PM14.12	Angles Around a Point
		PM14.11	Angles on a Straight Line
		PM14.15	Vertically Opposite Angles
	describe positions on the full coordinate grid (all 4 quadrants)	PM15.02	Four Quadrants
	draw and translate simple shapes on the coordinate plane, and reflect them in the axes	PM15.03	Translation 2
		PM15.04	Reflection 2
Statistics	interpret and construct pie charts and line graphs and use these to solve problems	PM9.09	Line Graphs 3
		PM9.10	Pie Charts 1
		PM9.11	Pie Charts 2
	calculate and interpret the mean as an average	PM9.12	Finding the Mean

Course Content
Primary Multiplication Tables

Diagnostics 1   **Strands** 6   **Nuggets** 52

This course is designed to develop fluency and recall of multiplication tables. It includes each of the times tables, mixed tables tests and practice tests of increasing difficulty.

Strands - Primary Multiplication Tables Course

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets
Diagnostic Assessment	1
Multiplication Tables	33
Easy Practice	3
Medium Practice	3
Hard Practice	3
Practice Assessments	10

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	PMT0.01	Diagnostic: Practice Assessment
Multiplication Tables	PMT1.01	2 Times Table Practice (1)
	PMT1.02	2 Times Table Practice (2)
	PMT1.03	2 Times Table Practice (3)
	PMT1.04	3 Times Table Practice (1)
	PMT1.05	3 Times Table Practice (2)
	PMT1.06	3 Times Table Practice (3)
	PMT1.07	4 Times Table Practice (1)
	PMT1.08	4 Times Table Practice (2)
	PMT1.09	4 Times Table Practice (3)
	PMT1.10	5 Times Table Practice (1)
	PMT1.11	5 Times Table Practice (2)
	PMT1.12	5 Times Table Practice (3)
	PMT1.13	6 Times Table Practice (1)
	PMT1.14	6 Times Table Practice (2)
	PMT1.15	6 Times Table Practice (3)
	PMT1.16	7 Times Table Practice (1)
	PMT1.17	7 Times Table Practice (2)
	PMT1.18	7 Times Table Practice (3)

Strand	Code	Nugget Name
Multiplication Tables	PMT1.19	8 Times Table Practice (1)
	PMT1.20	8 Times Table Practice (2)
	PMT1.21	8 Times Table Practice (3)
	PMT1.22	9 Times Table Practice (1)
	PMT1.23	9 Times Table Practice (2)
	PMT1.24	9 Times Table Practice (3)
	PMT1.25	10 Times Table Practice (1)
	PMT1.26	10 Times Table Practice (2)
	PMT1.27	10 Times Table Practice (3)
	PMT1.28	11 Times Table Practice (1)
	PMT1.29	11 Times Table Practice (2)
	PMT1.30	11 Times Table Practice (3)
	PMT1.31	12 Times Table Practice (1)
	PMT1.32	12 Times Table Practice (2)
	PMT1.33	12 Times Table Practice (3)
Easy Practice	PMT2.01	Easy Practice (1)
	PMT2.02	Easy Practice (2)
	PMT2.03	Easy Practice (3)
Medium Practice	PMT3.01	Medium Practice (1)
	PMT3.02	Medium Practice (2)
	PMT3.03	Medium Practice (3)

Strand	Code	Nugget Name
Hard Practice	PMT4.01	Hard Practice (1)
	PMT4.02	Hard Practice (2)
	PMT4.03	Hard Practice (3)
Practice Assessments	PMT5.01	Practice Assessment (1)
	PMT5.02	Practice Assessment (2)
	PMT5.03	Practice Assessment (3)
	PMT5.04	Practice Assessment (4)
	PMT5.05	Practice Assessment (5)
	PMT5.06	Practice Assessment (6)
	PMT5.07	Practice Assessment (7)
	PMT5.08	Practice Assessment (8)
	PMT5.09	Practice Assessment (9)
	PMT5.10	Practice Assessment (10)

Course Content
Primary Year 5-6 Arithmetic

Diagnostics 8   **Strands** 9   **Nuggets** 60

This course is designed for students to practise fluency and recall in number skills. It includes several practice papers and is designed specifically to help students prepare for the SATs arithmetic assessment.

Strands - Primary Year 5 - 6 Arithmetic Course

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	No. of nuggets
Diagnostics	8
Place Value	2
Addition and Subtraction	15
Multiplication	10
Division	8
Mixed Operations	4
Fractions	7
Percentages	8
Diagnostics: Practice Papers	6

Nuggets mapped to the National Curriculum

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	PAR0.01	Diagnostic: Place Value
	PAR0.02	Diagnostic: Addition
	PAR0.03	Diagnostic: Subtraction
	PAR0.04	Diagnostic: Multiplication
	PAR0.05	Diagnostic: Division
	PAR0.06	Diagnostic: Mixed Operations
	PAR0.07	Diagnostic: Fractions
	PAR0.08	Diagnostic: Percentages
Place Value	PAR1.01	Place Value 1
	PAR1.02	Place Value 2
Addition and Subtraction	PAR2.01	Addition Mental Methods 1
	PAR2.02	Addition Mental Methods 2
	PAR2.03	Addition Written Methods 1
	PAR2.04	Addition Written Methods 2
	PAR2.05	Addition Written Methods with Decimals 1
	PAR2.06	Addition Written Methods with Decimals 2
	PAR2.07	Subtraction Mental Methods 1
	PAR2.08	Subtraction Mental Methods 2a
	PAR2.09	Subtraction Mental Methods 2b

Strand	Code	Nugget Name
Addition and Subtraction	PAR2.10	Subtraction Mental Methods 3
	PAR2.11	Subtraction Written Methods 1
	PAR2.12	Subtraction Written Methods 2
	PAR2.13	Subtraction Involving Decimals
	PAR2.14	Subtraction Written Methods (with Decimals) 1
	PAR2.15	Subtraction Written Methods (with Decimals) 2
Multiplication	PAR3.01	Multiplying by 1 and 0
	PAR3.02	Multiplying by 10, 100 and 1,000
	PAR3.03	Multiplying Multiples of 10 and 100
	PAR3.04	Multiplying 3 Numbers
	PAR3.05	Multiplying by Multiples of 10 and 100 with Decimals
	PAR3.06	Short Multiplication
	PAR3.07	Long Multiplication 1
	PAR3.08	Long Multiplication 2
	PAR3.09	Multiplying by Decimals 1
	PAR3.10	Multiplying by Decimals 2
Division	PAR4.01	Dividing by 1
	PAR4.02	Mental Division
	PAR4.03	Dividing by 10 and 100 with Decimals
	PAR4.04	The Bus Stop Method
	PAR4.05	Long Division 1
	PAR4.06	Long Division 2
	PAR4.07	Long Division 3

Strand	Code	Nugget Name
Division	PAR4.08	Long Division 4
Mixed Operations	PAR5.01	Squared and Cubed Numbers 1
	PAR5.02	Squared and Cubed Numbers 2
	PAR5.03	BIDMAS 1
	PAR5.04	BIDMAS 2
Fractions	PAR6.01	Adding and Subtracting Fractions 1
	PAR6.02	Adding and Subtracting Fractions 2
	PAR6.03	Adding and Subtracting Fractions 3
	PAR6.04	Dividing Fractions by a Whole Number
	PAR6.05	Multiply Fractions by Fractions
	PAR6.06	Multiply Proper Fractions by a Whole Number
	PAR6.07	Multiply Mixed Numbers by a Whole Number
Percentages	PAR7.01	Finding Percentages of Amounts 1
	PAR7.02	Finding 1 - 9% of an Amount
	PAR7.03	Finding Multiples of 10% of an Amount
	PAR7.04	Percentages of 1,000
	PAR7.05	Finding Percentages of Amounts 2
	PAR7.06	Finding Percentages of Amounts 3
	PAR7.07	Finding Percentages of Amounts 4
	PAR7.08	Finding Percentages of Amounts 5
Diagnostics: Practice Papers	PAR8.01	Arithmetic Practice Assessment 1
	PAR8.02	Arithmetic Practice Assessment 2
	PAR8.03	Arithmetic Practice Assessment 3

Strand	Code	Nugget Name
Diagnostics: Practice Papers	PAR8.04	Arithmetic Practice Assessment 4
	PAR8.05	Arithmetic Practice Assessment 5
	PAR8.06	Arithmetic Practice Assessment 6

Course Content
Mathematics Secondary - Foundation and Higher

Course Mathematics Secondary (F)

Diagnostics 81   **Strands** 59   **Nuggets** 675

Course Mathematics Secondary (H)

Diagnostics 137   **Strands** 71   **Nuggets** 961

These courses cover all the content required at secondary (KS3 and KS4) for those targeting the Foundation or Higher GCSE.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Ⓗ **Higher Only**

Strand	Nuggets	Course
Diagnostics	10	
Higher Diagnostics	11	Ⓗ
Topic Diagnostics: Number	29	
Topic Diagnostics: Ratio and Proportion	6	
Topic Diagnostics: Algebra	23	
Topic Diagnostics: Graphs	10	
Topic Diagnostics: Geometry	28	
Topic Diagnostics: Measures	7	

Strand	Nuggets	Course
Topic Diagnostics: Probability	6	
Topic Diagnostics: Statistics	7	
Simple Arithmetic	14	
Understanding Number	13	
Four Operations	19	
Working with Fractions	41	
Factors, Multiples and Primes	20	
Working with Decimals	14	
Introduction to Percentages (NC)	15	
Fractions, Decimals and Percentages	19	
Recurring Decimals	8	Ⓗ
Rounding	24	
Percentages Non-Calculator	6	
Percentages Calculator	19	
Powers and Roots	7	
Surds	16	Ⓗ
Indices	24	
Standard Form	10	
Ratio	22	
Ratio and Proportion	16	
Introduction to Algebra	18	
Expanding and Factorising	25	
Solving Linear Equations	33	
Solving Quadratic Equations	14	
Completing the Square	9	Ⓗ

Algebraic Fractions	13	(H)
Formulae	11	
Algebraic Proof	4	(H)
Functions	17	(H)
Sequences	19	
Straight Line Graphs	26	
Quadratic and Other Graphs	36	
Inequalities	21	
Introduction to Geometry	16	
Angles	12	
Angles in Polygons	11	
2D Shapes	7	
Perimeter	6	
Area	9	
Circles	19	
3D Shapes	4	
Volume	18	
Surface Area	9	
Measure	22	
Time and Money	12	
Compound Measure	25	
Scale Drawings and Bearings	10	
Transformations	24	
Circle Theorems	12	(H)

Vectors	13	
Construction and Loci	10	
Similarity	10	
Pythagoras	7	
Right-Angled Trigonometry	8	
Advanced Trigonometry	18	(H)
3D Trigonometry	5	(H)
Probability	28	
Sets and Venn Diagrams	20	
Collecting Data	8	
Analysing Data	21	
Displaying Data	18	
Cumulative Frequency and Box Plots	14	(H)
Histograms	12	(H)

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

(H) **Higher Only**

Strand	Code	Nugget Name	Course
Diagnostics	MF0.01	Diagnostic: Number 1	
	MF0.02	Diagnostic: Algebra 1	
	MF0.30	Diagnostic: Ratio and Proportion 1	
	MF0.03	Diagnostic: Geometry 1	
	MF0.04	Diagnostic: Number 2	

Diagnostics	MF0.05	Diagnostic: Probability 1	
	MF0.06	Diagnostic: Statistics 1	
	MF0.07	Diagnostic: Algebra 2	
	MF0.31	Diagnostic: Ratio and Proportion 2	
	MF0.08	Diagnostic: Geometry 2	
Higher Diagnostics	MH0.09	Diagnostic: Number 3	Ⓗ
	MH0.10	Diagnostic: Number 4	Ⓗ
	MH0.11	Diagnostic: Algebra 3	Ⓗ
	MH0.12	Diagnostic: Algebra 4	Ⓗ
	MH0.13	Diagnostic: Algebra 5	Ⓗ
	MH0.32	Diagnostic: Ratio and Proportion 3	Ⓗ
	MH0.14	Diagnostic: Geometry 3	Ⓗ
	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	Ⓗ
	MH0.16	Diagnostic: Statistics 2	Ⓗ
	MH0.17	Diagnostic: Probability 2	Ⓗ
	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	Ⓗ
Topic Diagnostics: Number	MF00.01	Topic Diagnostic: Times Tables	
	MF00.02	Topic Diagnostic: Calculations 1	
	MF00.03	Topic Diagnostic: Calculations 2	
	MF00.04	Topic Diagnostic: Negative Numbers	
	MF00.05	Topic Diagnostic: Decimals	
	MH00.01	Topic Diagnostic: Rounding and Estimating	Ⓗ
	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator	

Topic Diagnostics: Number	MF00.07	Topic Diagnostic: Fractions	
	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction	
	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division	
	MF00.10	Topic Diagnostic: Fractions of an Amount	
	MF00.11	Topic Diagnostic: Factors, Multiples and Primes	
	MF00.12	Topic Diagnostic: LCM and HCF 1	
	MH00.02	Topic Diagnostic: LCM and HCF 2	Ⓗ
	MF00.13	Topic Diagnostic: Percentages	
	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages	
	MH00.03	Topic Diagnostic: Recurring Decimals	Ⓗ
	MF00.15	Topic Diagnostic: Bounds 1	
	MH00.04	Topic Diagnostic: Bounds 2	Ⓗ
	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest	
	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse	
	MH00.05	Topic Diagnostic: Exponential Growth and Decay	Ⓗ
	MF00.18	Topic Diagnostic: Powers and Roots	
	MH00.06	Topic Diagnostic: Surds	Ⓗ
	MF00.19	Topic Diagnostic: Laws of Indices 1	
	MH00.07	Topic Diagnostic: Laws of Indices 2	Ⓗ
	MH00.08	Topic Diagnostic: Fractional Indices	Ⓗ
	MH00.09	Topic Diagnostic: Solving Problems with Indices	Ⓗ
	MF00.20	Topic Diagnostic: Standard Form	

Topic Diagnostics: Ratio and Proportion

MF00.21	Topic Diagnostic: Ratio	
MF00.22	Topic Diagnostic: Ratio: Sharing 1	
MH00.10	Topic Diagnostic: Ratio: Sharing 2	(H)
MF00.23	Topic Diagnostic: Proportion	
MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	
MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	(H)

Topic Diagnostics: Algebra

MF00.25	Topic Diagnostic: Simple Algebra	
MF00.26	Topic Diagnostic: Expanding and Factorising Single Brackets	
MF00.27	Topic Diagnostic: Expanding and Factorising Double Brackets	
MH00.12	Topic Diagnostic: Factorising Non-monic Quadratics	(H)
MF00.28	Topic Diagnostic: Solving Linear Equations 1	
MF00.29	Topic Diagnostic: Solving Linear Equations 2	
MF00.30	Topic Diagnostic: Solving Simultaneous Linear Equations	
MH00.13	Topic Diagnostic: Iteration	(H)
MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
MH00.14	Topic Diagnostic: The Quadratic Formula	(H)
MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	(H)
MH00.16	Topic Diagnostic: Completing the Square	(H)
MH00.17	Topic Diagnostic: Algebraic Fractions	(H)
MF00.32	Topic Diagnostic: Formulae	
MH00.18	Topic Diagnostic: Algebraic Proof	(H)
MH00.19	Topic Diagnostic: Functions	(H)
MH00.20	Topic Diagnostic: Composite Functions	(H)

Topic Diagnostics: Algebra

MH00.21	Topic Diagnostic: Inverse Functions	(H)
MF00.33	Topic Diagnostic: Sequences	
MH00.22	Topic Diagnostic: Quadratic Sequences	(H)
MF00.34	Topic Diagnostic: Inequalities	
MF00.35	Topic Diagnostic: Solving Inequalities 1	
MH00.23	Topic Diagnostic: Solving Inequalities 2	(H)

Topic Diagnostics: Graphs

MF00.36	Topic Diagnostic: Coordinates	
MF00.37	Topic Diagnostic: Straight Line Graphs 1	
MH00.24	Topic Diagnostic: Straight Line Graphs 2	(H)
MH00.25	Topic Diagnostic: Inequality Regions	(H)
MF00.38	Topic Diagnostic: Quadratic Graphs 1	
MH00.26	Topic Diagnostic: Quadratic Graphs 2	(H)
MF00.39	Topic Diagnostic: Other Graphs 1	
MH00.27	Topic Diagnostic: Other Graphs 2	(H)
MH00.28	Topic Diagnostic: Trigonometric Graphs	(H)
MH00.29	Topic Diagnostic: Graph Transformations	(H)

Topic Diagnostics: Geometry

MF00.40	Topic Diagnostic: 2D and 3D Shapes	
MF00.41	Topic Diagnostic: Angles	
MF00.42	Topic Diagnostic: Angle Rules	
MF00.43	Topic Diagnostic: Angles in Parallel Lines	
MF00.44	Topic Diagnostic: Angles in Polygons	
MF00.45	Topic Diagnostic: Perimeter	
MF00.46	Topic Diagnostic: Area	
MF00.47	Topic Diagnostic: Circles: Circumference	

Topic Diagnostics: Geometry	MF00.48	Topic Diagnostic: Circles: Area	
	MH00.30	Topic Diagnostic: Circles: Arcs and Sectors	(H)
	MF00.49	Topic Diagnostic: Volume 1	
	MH00.31	Topic Diagnostic: Volume 2	(H)
	MF00.50	Topic Diagnostic: Surface Area	
	MF00.51	Topic Diagnostic: Reflection, Rotation and Translation	
	MF00.52	Topic Diagnostic: Enlargements and Mixed Transformations 1	
	MH00.32	Topic Diagnostic: Enlargements and Mixed Transformations 2	(H)
	MH00.33	Topic Diagnostic: Circle Theorems	(H)
	MF00.53	Topic Diagnostic: Vectors	
	MH00.34	Topic Diagnostic: Geometric Vectors	(H)
	MF00.54	Topic Diagnostic: Constructions and Loci	
	MF00.55	Topic Diagnostic: Similarity 1	
	MH00.35	Topic Diagnostic: Similarity 2	(H)
	MF00.56	Topic Diagnostic: Pythagoras' Theorem	
	MF00.57	Topic Diagnostic: Right-Angled Trigonometry	
	MH00.36	Topic Diagnostic: Sine and Cosine Rules	(H)
	MH00.37	Topic Diagnostic: Mixed Trigonometry	(H)
	MH00.38	Topic Diagnostic: 3D Pythagoras and Trigonometry	(H)
	MF00.58	Topic Diagnostic: Scale Drawings and Bearings	
Topic Diagnostics: Measures	MF00.59	Topic Diagnostic: Measures 1	
	MF00.60	Topic Diagnostic: Measures 2	
	MF00.61	Topic Diagnostic: Measures of Time	

Topic Diagnostics: Measures	MF00.62	Topic Diagnostic: Conversions	
	MF00.63	Topic Diagnostic: Compound Measures: Speed	
	MF00.64	Topic Diagnostic: Compound Measures: Density	
	MH00.39	Topic Diagnostic: Velocity-time Graphs	(H)
Topic Diagnostics: Probability	MF00.65	Topic Diagnostic: Probability 1	
	MH00.40	Topic Diagnostic: Probability 2	(H)
	MF00.66	Topic Diagnostic: Tree Diagrams 1	
	MH00.41	Topic Diagnostic: Tree Diagrams 2	(H)
	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	(H)
Topic Diagnostics: Statistics	MF00.68	Topic Diagnostic: Collecting Data	
	MF00.69	Topic Diagnostic: Displaying Data	
	MF00.70	Topic Diagnostic: Averages and the Range	
	MF00.71	Topic Diagnostic: Averages and the Range from a Frequency Table	
	MH00.43	Topic Diagnostic: Cumulative Frequency	(H)
	MH00.44	Topic Diagnostic: Box Plots	(H)
	MH00.45	Topic Diagnostic: Histograms	(H)
Simple Arithmetic	MF1.01	Addition	
	MF1.02	Subtraction	
	MF1.03	Addition and Subtraction	
	MF1.04	Times Tables: 2, 5 and 10	
	MF1.05	Times Tables: 3 and 4	
	MF1.06	Times Tables: 6 and 7	

Simple Arithmetic

MF1.07	Times Tables: 8 and 9
MF1.08	Times Tables: 11 and 12
MF1.09	Commutative Law
MF1.10	Associative Law
MF1.11	Division: 1, 2, 3, 4, 5 and 10
MF1.12	Division: 6, 7, 8, 9, 11 and 12
MF1.13	Division: Mixed
MF1.14	Distributive Law

Understanding Number

MF2.01	Integer Place Value
MF2.02	Mathematical Symbols
MF2.03	Negative Numbers
MF2.04	Symmetrical Subtraction
MF2.05	Adding Negatives
MF2.06	Subtracting Negatives
MF2.07	Negatives and Positives
MF2.08	Ordering Integers
MF2.09	Ordering Decimals
MF2.10	Ordering Negatives
MF2.11	Multiplying by Powers of Ten
MF2.12	Dividing by Powers of Ten
MF2.13	Rounding to the nearest 10, 100 and 1000

Four Operations

MF3.01	Column Addition
MF3.02	Column Subtraction
MF3.03	Addition and Subtraction: Worded Questions
MF3.04	Multiplying Negatives
MF3.05	Dividing Negatives
MF3.06	Multiplying and Dividing with Negatives
MF3.07	Column Multiplication
MF3.08	Grid Multiplication
MF3.09	Multiplication with Napier's Bones
MF3.10	Testing for Divisibility
MF3.11	Short Division
MF3.12	Dividing by Multi-Digit Numbers
MF3.13	Multiplication and Division: Worded Questions
MF3.14	BIDMAS Introduction
MF3.15	BIDMAS Intermediate
MF3.16	BIDMAS Advanced
MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
MF3.18	Using a Calculator 2: Multiple Numbers
MF3.19	Long Division

Working with Fractions

MF4.01	Expressing Fractions
MF4.02	Ordering Fractions
MF4.03	Equivalent Fractions
MF4.04	Simplifying Fractions
MF4.05	Shading Fractions
MF4.06	Mixed and Improper Fractions

Working with Fractions

MF4.07	Adding Fractions 1: Same Denominator	
MF4.08	Adding Fractions 2: Convert 1 Denominator	
MF4.09	Adding Fractions 3: Convert 1 Denominator (Sum >1)	
MF4.10	Adding Fractions 4: Convert all Denominators	
MF4.36	Fractions: Subtracting from 1	
MF4.11	Subtracting Fractions	
MF4.12	Adding and Subtracting Fractions	
MF4.13	Adding Improper Fractions	
MF4.14	Adding Mixed Numbers	
MF4.15	Adding Improper Fractions and Mixed Numbers	
MF4.16	Subtracting Improper Fractions	
MF4.17	Subtracting Mixed Numbers	
MF4.18	Subtracting Improper Fractions and Mixed Numbers	
MF4.19	Adding and Subtracting Improper Fractions	
MF4.20	Adding and Subtracting Mixed Numbers	
MF4.21	Adding and Subtracting Improper Fractions and Mixed Numbers	
MF4.37	Fractions on a Number Line 1: Between 0 and 1	
MF4.38	Fractions on a Number Line 2: Beyond 1	
MF4.22	Reciprocals	
MF4.23	Multiplying Fractions 1	
MF4.24	Multiplying Fractions 2	
MF4.25	Dividing Fractions	
MF4.26	Multiplying and Dividing Mixed Numbers	
MF4.27	Multiplying with Whole Numbers and Fractions	

Working with Fractions

MF4.28	Dividing with Whole Numbers and Fractions	
MF4.39	Fraction of Amounts: Modelling	
MF4.29	Fraction of Amounts: Non-Calculator	
MF4.30	Fraction of Amounts: Calculator	
MF4.31	Increasing and Decreasing by Fractions	
MF4.40	Fraction of Amounts: Modelling Finding the Whole	
MF4.32	Reverse Fractions	
MF4.33	Reverse Fractions: Worded Questions	
MF4.34	Estimating Products of Fractions	
MF4.35	Dividing Fractions (Bar Model)	
MH4.34	Applied Fractions	(H)

Factors, Multiples and Primes

MF5.01	Odds and Evens with Addition and Subtraction	
MF5.02	Odds and Evens with Multiplication	
MF5.03	Primes	
MF5.04	Multiples	
MF5.05	Factors	
MF5.06	Multiples and Factors	
MF5.07	Lowest Common Multiple - Listing Technique	
MF5.08	Highest Common Factor - Listing Technique	
MF5.09	Prime Factorisation 1: Factor Tree Given	
MF5.10	Prime Factorisation 2	
MF5.11	Uses of Prime Factorisation	
MF5.12	HCF Using Prime Factorisation: Venn Diagrams	

Factors, Multiples and Primes

MF5.13	HCF Using Prime Factorisation: Product of Prime Factors	
MF5.14	LCM Using Prime Factorisation: Venn Diagrams	
MF5.15	LCM Using Prime Factorisation: Product of Prime Factors	
MF5.16	HCF and LCM with Prime Factorisation	
MH5.17	HCF and LCM of 3 Numbers	(H)
MH5.18	Solving Problems with HCF and LCM 1	(H)
MH5.19	Solving Problems with HCF and LCM 2	(H)
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	MH51.04	Recurring Decimals 1: 1 – 2 Digits	Ⓗ
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Introduction to Algebra

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Straight Line Graphs

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Quadratic and Other Graphs

Quadratic and Other Graphs

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Inequalities

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	MF31.06	Area of Composite Shapes 1: Adding
	MF31.07	Area of Trapeziums
	MF31.08	Area of Composite Shapes 2: Subtracting
	MF31.09	Area and Algebra
Circles	MF32.01	Circumference: From Radius
	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter
	MF32.05	Perimeter of Part Circles
	MF32.06	Perimeter of Composite Shapes with Part Circles
	MF32.07	Area of a Circle: From Radius
	MF32.08	Area of a Circle: From Diameter
	MF32.09	Area of a Circle
	MF32.10	Using the Area of a Circle to find the Radius or Diameter
	MF32.11	Areas of Part Circles
	MF32.12	Areas of Composite Shapes with Part Circles
	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MH32.17	Arc Length 3: Reverse (H)
	MF32.15	Area of a Sector 1
	MH32.18	Area of a Sector 2: Reverse (H)

Circles	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving (H)
3D Shapes	MF33.01	Planes of Symmetry
	MF33.02	Nets of Cubes
	MF33.03	Plans and Elevations with Cuboids
	MF33.04	Plans and Elevations
Volume	MF34.01	Counting Cubes
	MF34.02	Volume of Cubes and Cuboids
	MF34.03	Volume of Cubes and Cuboids with Missing Side(s)
	MF34.04	Volume of Prisms 1: Given Area
	MF34.05	Volume of Prisms 2: Triangular Prisms
	MF34.06	Volume of Prisms 3: Mixed Exercise
	MF34.07	Volume of Cylinders
	MF34.08	Volume of Cylinders with a Missing Value
	MF34.09	Volume of Part Cylinders
	MF34.10	Volume of a Sphere
	MF34.11	Volume of a Sphere with the Radius Missing
	MF34.12	Volume of a Cone
	MF34.13	Volume of a Cone with the Radius Missing
	MF34.14	Volume of a Hemisphere
	MF34.15	Volume of Pyramids
	MF34.16	Volume of Composite Solids

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Volume	MH34.17	Problem Solving with Volume (H)
	MH34.18	Volume of Frustums (H)
Surface Area	MF35.01	Surface Area of Cuboids
	MF35.02	Surface Area of Prisms
	MF35.03	Surface Area of Cylinders
	MF35.04	Surface Area of Part Cylinders
	MF35.05	Surface Area of Spheres
	MF35.06	Surface Area of Cones
	MF35.07	Surface Area of Pyramids
	MF35.08	Surface Area of Composite Solids
	MH35.09	Problem Solving with Surface Area (H)
Measure	MF36.01	Reading Scales
	MF36.02	Metric Units
	MF36.03	Estimating with Metric Units
	MF36.04	Converting Metric Length (One Step)
	MF36.05	Converting Metric Length (Multi-Step)
	MF36.06	Converting Metric Length: Worded Questions
	MF36.07	Converting Metric Mass (One Step)
	MF36.08	Converting Metric Mass (Multi-Step)
	MF36.09	Converting Metric Mass: Worded Questions
	MF36.10	Converting Metric Capacity
	MF36.11	Converting Metric Volume 1

Measure	MF36.12	Converting Metric Volume 2
	MF36.13	Converting Area 2: Unit Conversions
	MF36.14	Converting Area 1: Area Model
	MF36.15	Converting Volume
	MF36.16	Metric and Imperial Length (No Calculator)
	MF36.17	Metric and Imperial Length (Calculator)
	MF36.18	Metric and Imperial Mass and Volume (No Calculator)
	MF36.19	Metric and Imperial Mass and Volume (Calculator)
	MF36.20	Conversion Graphs: Drawing
	MF36.21	Conversion Graphs: Interpreting
	MF36.22	Conversion Graphs: Units of Measure
Time and Money	MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past
	MF37.02	Reading a 12-Hour Clock 2: Multiples of 5
	MF37.03	Reading a 12-Hour Clock 3: Mixed
	MF37.04	Converting Time: AM and PM
	MF37.05	Converting Time: Seconds, Minutes and Hours
	MF37.06	Converting Time: Days, Weeks and Years
	MF37.07	Calendar Months
	MF37.08	Converting Time: Mixed Units
	MF37.09	Problems with Time
	MF37.10	Converting Currency 1
	MF37.11	Converting Currency 2: Double Conversions
	MF37.12	Converting Currency: Mixed Problems

Compound Measure

MF38.01	Finding Speed (SDT)	
MF38.02	Finding Speed with Conversions (SDT)	
MF38.03	Finding Distance (SDT)	
MF38.04	Finding Distance with Conversions (SDT)	
MF38.05	Finding Time (SDT)	
MF38.06	Finding Time with Conversions (SDT)	
MF38.07	Speed, Distance and Time: Mixed Questions	
MF38.08	Converting Units with Speed, Distance and Time	
MF38.09	Understanding and Converting Units (DMV)	
MF38.10	Finding Density (DMV)	
MF38.11	Finding Density with Conversions (DMV)	
MF38.12	Finding Mass (DMV)	
MF38.13	Finding Mass with Conversions (DMV)	
MF38.14	Finding Volume (DMV)	
MF38.15	Finding Volume with Conversions (DMV)	
MF38.16	Density, Mass and Volume: Mixed Questions	
MF38.17	Converting Units with Density, Mass and Volume	
MF38.18	Force, Pressure and Area	
MF38.19	Distance-Time Graphs: Drawing	
MF38.20	Distance-Time Graphs: Interpreting	
MF38.21	Distance-Time Graphs: Speed	

Compound Measure

MH38.22	Velocity-Time Graph: Interpreting	(H)
MH38.23	Velocity-Time Graph: Distance	(H)
MH38.24	Velocity-Time Graph: Acceleration	(H)
MH38.25	Velocity-Time Graph: Problem Solving	(H)

Scale Drawings and Bearings

MF39.01	Using Scales with Units	
MF39.02	Finding Scales with Units	
MF39.03	Using Scales without Units	
MF39.04	Finding Scales without Units	
MF39.05	Using Scales on a Map	
MF39.10	Creating Scale Diagrams	
MF39.06	Introduction to Bearings	
MF39.07	Bearings from North	
MF39.08	Finding Bearings 1	
MF39.09	Finding Bearings 2: Using Co-interior Angles	

Transformations

MF40.01	Introduction to Reflection	
MF40.02	Finding the Line of Reflection	
MF40.03	Coordinates in Reflection	
MF40.04	Translating a Point	
MF40.05	Translating a Shape	
MF40.06	Describing Translations	
MF40.07	Enlarging Shapes	
MF40.08	Enlargements with 0<SF<1	

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	MF40.09	Enlargement with Centre (0,0)	
	MF40.10	Enlargement with Centre (x,y)	
	MF40.11	Enlargement with Fractional Scale Factor (0,0)	
	MF40.12	Enlargement with Fractional Scale Factor (x,y)	
	MH40.20	Enlargement with Negative Scale Factor	(H)
	MH40.21	Enlargement with Negative Fractional Scale Factor	(H)
Transformations	MH40.22	Enlargement with Mixed Scale Factor	(H)
	MF40.13	Describing Enlargements with an Integer Scale Factor	
	MF40.14	Describing Enlargements with a Non-Integer Scale Factor	
	MH40.23	Describing Enlargements with Mixed Scale Factor	(H)
	MF40.15	Rotation with Centre (0,0)	
	MF40.16	Rotation with Centre (x,y)	
	MF40.17	Describing Rotation	
	MF40.18	Describing Transformations	
	MF40.19	Combination of Transformations 1	
	MH40.24	Combination of Transformations 2	(H)
	MH57.01	Angle in a Semicircle and Angle at Tangent	(H)
	MH57.02	Properties of Diameter and Radii	(H)
Circle Theorems	MH57.03	Tangents from an External Point	(H)
	MH57.04	Angles at the Centre	(H)
	MH57.05	Angles on the Same Arc	(H)
	MH57.06	Angles at the Centre and on the Same Arc	(H)

	MH57.07	Cyclic Quadrilaterals	(H)
	MH57.08	Alternate Segment Theorem	(H)
Circle Theorems	MH57.09	Mixed Circle Theorems 1: Practice	(H)
	MH57.10	Mixed Circle Theorems 2: Algebra	(H)
	MH57.11	Mixed Circle Theorems 3: Two Theorems	(H)
	MH57.12	Mixed Circle Theorems 4: Challenge	(H)
	MF41.01	Column Vectors	
	MF41.02	Column Vectors: Scalar Multiplication	
	MF41.03	Column Vectors: Addition and Subtraction	
	MF41.04	Column Vectors: Drawing	
	MF41.05	Geometric Vectors 1: One Term	
	MF41.06	Geometric Vectors 2: Two Terms	
Vectors	MH41.07	Geometric Vectors 3: Within Shapes	(H)
	MH41.08	Geometric Vectors 4: Expand and Simplify	(H)
	MH41.09	Geometric Vectors 5: Midpoints	(H)
	MH41.10	Geometric Vectors 6: Ratios	(H)
	MH41.11	Geometric Vectors 7: Fractions and Ratios	(H)
	MH41.12	Geometric Vectors 8: Parallel Vectors	(H)
	MH41.13	Geometric Vectors 9: Proof	(H)
Construction and Loci	MF42.01	Constructing Circles	
	MF42.02	Constructing an Equilateral Triangle	
	MI42.10	Constructing Triangles	

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Construction and Loci	MF42.03	Perpendicular Bisector	
	MF42.04	Angle Bisector	
	MF42.05	Perpendicular from a Point to a Line	
	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)	
	MF42.07	Understanding Loci	
	MF42.08	Loci 1: Single Constructions	
	MF42.09	Loci 2: Multi-Step Problems	
Similarity	MF43.01	Introduction to Similarity	
	MF43.02	Similar Polygons: Finding the Scale Factor	
	MF43.03	Similar Polygons: Missing Sides given Scale Factor	
	MF43.04	Similar Polygons: Missing Sides	
	MF43.05	Similar Triangles 1: Same Orientation	
	MF43.06	Similar Triangles 2: Different Orientations	
	MH43.07	Similar Area 1	Ⓗ
	MH43.08	Similar Area 2: Including Ratio	Ⓗ
	MH43.09	Similar Volume	Ⓗ
	MH43.10	Similar Area and Volume	Ⓗ
Pythagoras	MF44.01	Pythagoras' Theorem	
	MF44.02	Pythagoras: Finding the Hypotenuse	
	MF44.03	Pythagoras: Finding a Short Side	
	MF44.04	Pythagoras: Mixed Sides	
	MF44.05	Pythagoras: Using Coordinates	

Pythagoras	MF44.06	Pythagoras: Worded Questions	
	MF44.07	Pythagoras: Applied Questions	
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA	
	MF45.02	Trigonometry: Using a Calculator	
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)	
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)	
	MF45.05	Trigonometry: Missing Angle	
	MF45.06	Trigonometry: Worded Questions	
	MF45.07	Exact Trigonometric Values	
	MF45.08	Trigonometry and Pythagoras	
Advanced Trigonometry	MH58.01	Area using ½ (ab) sin (C): Proof	Ⓗ
	MH58.02	½ (ab) sin (C): Finding the area	Ⓗ
	MH58.03	½ (ab) sin (C): Area with Missing Value	Ⓗ
	MH58.04	½ (ab) sin (C): Applied	Ⓗ
	MH58.05	Sine Rule: Proof	Ⓗ
	MH58.06	Sine Rule: Sides	Ⓗ
	MH58.07	Sine Rule: Angles	Ⓗ
	MH58.08	Sine Rule: Applied	Ⓗ
	MH58.09	Cosine Rule: Proof	Ⓗ
	MH58.10	Cosine Rule: Finding a	Ⓗ
	MH58.11	Cosine Rule: Finding A	Ⓗ
	MH58.12	Cosine Rule: Applied	Ⓗ

Advanced Trigonometry	MH58.13	Choosing the Correct Trigonometric Rule	(H)
	MH58.14	Mixed Trigonometry 1	(H)
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems	(H)
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems	(H)
	MH58.17	Mixed Trigonometry 4: Non-Calculator	(H)
	MH58.18	Mixed Trigonometry 5: Bearings	(H)
3D Trigonometry	MH59.01	3D Pythagoras 1: Cuboids	(H)
	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	(H)
	MH59.03	3D SOH CAH TOA	(H)
	MH59.04	3D Trigonometry	(H)
	MH59.05	3D Trigonometry: Problem Solving	(H)
Probability	MF46.01	Probability Scale in Words	
	MF46.02	Probability Scale in Numbers	
	MF46.03	Calculating Probability	
	MF46.04	Mutually Exclusive Events	
	MF46.05	Two Way Tables: Probability	
	MF46.06	Listing Outcomes	
	MH46.18	Product Rule for Counting	(H)
	MF46.07	Sample Spaces	
	MF46.08	Relative Frequency	
	MF46.09	Expected Frequency	
	MF46.10	Frequency Trees	

Probability	MF46.11	Interpreting Frequency Trees	
	MF46.12	Multiplication Law of Probability (AND)	
	MF46.13	Addition Law of Probability (OR)	
	MH46.19	Addition Law of Probability (General OR)	(H)
	MF46.14	Tree Diagrams 1: Completing Diagrams	
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome	
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes	
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)	
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)	(H)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)	(H)
	MH46.22	Tree Diagrams 7: NOT Statements	(H)
	MH46.23	Tree Diagrams 8: Reverse	(H)
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)	(H)
	MH46.25	Tree Diagrams 10: Conditional Probability Multiple Outcomes)	(H)
	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)	(H)
	MH46.27	Tree Diagrams 12: Algebraic Expressions	(H)
	MH46.28	Tree Diagrams 13: Solving Equations	(H)
Sets and Venn Diagrams	MF47.01	Set Notation	
	MF47.02	Elements in a Set 1: Identifying Elements	
	MF47.03	Elements in a Set 2: Unions and Intersections	

	MF47.04	Elements in a Set 3: Complements
	MF47.05	Introduction to Venn Diagrams
	MF47.06	Constructing Venn Diagrams 1: Listing Elements
	MF47.07	Constructing Venn Diagrams 2: Writing Values
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams (H)
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation) (H)
	MH47.14	Venn Diagrams: Complements (H)
	MH47.15	Venn Diagrams with Algebra (H)
Sets and Venn Diagrams	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)
	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation) (H)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing) (H)
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B) (H)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams From Set Notation) (H)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation) (H)
Collecting Data	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
	MF48.03	Tally Chart

	MF48.04	Questionnaires
Collecting Data	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples
	MF48.07	Grouped Tally Charts: Discrete and Continuous
	MH48.08	Petersen's Capture-Recapture (H)
	MF49.01	Mode
	MF49.02	Median
	MF49.03	Mean 1: Positive Integers
	MF49.04	Mean 2: Decimals and Negatives
	MF49.05	Mean 3: Finding Missing Values
	MF49.06	Mean 4: Changing Means
	MF49.07	Range 1: Positive Integers
	MF49.08	Range 2: Decimals and Negatives
Analysing Data	MF49.09	Applying Averages and the Range 1: Raw Data
	MF49.10	Mode from Frequency Table
	MF49.11	Median from Frequency Table
	MF49.12	Mean from Frequency Table
	MF49.13	Range from Frequency Table
	MF49.14	Modal Class from Grouped Frequency Table
	MF49.15	Median from Grouped Frequency Table
	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data

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Analysing Data		
MF49.17	Mean from Grouped Frequency Table 2: Continuous Data	
MF49.18	Range from Grouped Frequency Table	
MF49.19	Applying Averages and the Range 2: Tables	
MF49.20	Using Averages and Range	
MF49.21	Using Averages and Range: Comparing Two Data Sets	

Displaying Data		
MF50.01	Completing Two Way Tables	
MF50.02	Interpreting Two Way Tables	
MF50.03	Pictograms	
MF50.04	Bar Charts	
MF50.05	Multiple and Composite Bar Charts	
MF50.06	Vertical Line Graphs	
MF50.07	Creating Stem and Leaf Diagrams	
MF50.08	Interpreting Stem and Leaf Diagrams	
MF50.09	Creating Pie Charts (No Calculator)	
MF50.10	Creating Pie Charts (Calculator)	
MF50.11	Interpreting Pie Charts	
MF50.12	Time Series Graphs	
MF50.13	Drawing Scatter Graphs	
MF50.14	Interpreting Scatter Graphs 1: Introduction	
MF50.15	Interpreting Scatter Graphs 2: Outliers	
MF50.16	Frequency Polygons: Drawing	

Displaying Data		
MF50.17	Frequency Polygons: Interpreting	
MF50.18	Interpreting Misleading Data Representations	

Cumulative Frequency and Box Plots		
MH60.01	Cumulative Frequency 1: Calculating	H
MH60.02	Cumulative Frequency 2: Drawing	H
MH60.03	Cumulative Frequency 3: Calculating Frequency	H
MH60.04	Cumulative Frequency 4: Finding Values	H
MH60.05	Cumulative Frequency 5: Median	H
MH60.06	Cumulative Frequency 6: Quartiles	H
MH60.07	Cumulative Frequency 7: Interquartile Range	H
MH60.08	Cumulative Frequency 8: Plot and Evaluate	H
MH60.09	Box Plots 1: Interpret	H
MH60.10	Box Plots 2: Finding Values to Plot	H
MH60.11	Box Plots 3: Draw from List	H
MH60.12	Box Plots 4: Draw from Data	H
MH60.13	Box Plots 5: Evaluate and Compare	H
MH60.14	Cumulative Frequency and Box Plots	H

Histograms		
MH61.01	Frequency Density 1: Calculating	H
MH61.02	Frequency Density 2: Problem Solving	H
MH61.03	Histograms 1: Choosing Axes	H
MH61.04	Histograms 2: Plotting	H
MH61.05	Histograms 3: Calculating Frequency	H
MH61.06	Histograms 4: Calculating Frequency within a Given Range	H

	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)	(H)
	MH61.08	Histograms 6: Finding Fractions and Percentages	(H)
Histograms	MH61.09	Histograms 7: Finding Proportions	(H)
	MH61.10	Histograms 8: Median	(H)
	MH61.11	Histograms 9: Mean	(H)
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)	(H)

Course Content
Mathematics Secondary (F+)

Diagnostics 84   **Strands** 62   **Nuggets** 758

This course contains diagnostics and catch-up material to ensure students are secondary ready. The course also covers all content required at secondary for those targeting the Foundation GCSE examination in year 11.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

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Diagnostics Catch Up	3
Diagnostics	10
Place Value Catch Up	12
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Topic Diagnostics: Ratio and Proportion	4
Topic Diagnostics: Algebra	11
Topic Diagnostics: Graphs	4
Topic Diagnostics: Geometry	
Topic Diagnostics: Measures	6
Topic Diagnostics: Probability	3

Topic Diagnostics: Statistics	4
Simple Arithmetic	16
Multiplication and Division	37
Understanding Number	17
Four Operations	19
Working with Fractions	44
Factors, Multiples and Primes	16
Working with Decimals	14
Introduction to Percentages (NC)	15
Fractions, Decimals and Percentages	19
Rounding	15
Percentages Non-Calculator	6
Percentages Calculator	16
Powers and Roots	6
Indices	7
Standard Form	10
Ratio	20
Ratio and Proportion	10
Introduction to Algebra	16
Expanding and Factorising	18
Solving Linear Equations	30
Solving Quadratic Equations	4

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Formulae	10
Sequences	13
Straight Line Graphs	20
Quadratic and Other Graphs	12
Inequalities	12
Introduction to Geometry	19
Angles	12
Angles in Polygons	11
2D Shapes	9
Perimeter	6
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Surface Area	8
Measure	31
Time and Money	18
Compound Measure	21
Scale Drawings and Bearings	10
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Construction and Loci	10

Similarity	6
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Right-Angled Trigonometry	8
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Sets and Venn Diagrams	11
Collecting Data	7
Analysing Data	21
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Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics Catch Up	MCU0.01	Diagnostic: Essential Four Operations
	MCU0.02	Diagnostic: Catch Up
	MCU0.03	Diagnostic: Secondary Ready
Diagnostics	MF0.01	Diagnostic: Number 1
	MF0.02	Diagnostic: Algebra 1
	MF0.30	Diagnostic: Ratio and Proportion 1
	MF0.03	Diagnostic: Geometry 1
	MF0.04	Diagnostic: Number 2
	MF0.05	Diagnostic: Probability 1
	MF0.06	Diagnostic: Statistics 1

Diagnostics	MF0.07	Diagnostic: Algebra 2
	MF0.31	Diagnostic: Ratio and Proportion 2
	MF0.08	Diagnostic: Geometry 2
Place Value Catch Up	PM10.01	Counting in Multiples of 2
	PM10.02	Counting in Multiples of 3
	PM1.01	Counting in Multiples of 4
	PM10.03	Counting in Multiples of 5
	PM1.02	Counting in Multiples of 8
	PM10.04	Counting in Multiples of 10
	PM1.03	Counting in Multiples of 50
	PM1.04	Counting in Multiples of 100
	PM1.05	3-Digit: Recognising Place Value
	PM1.06	3-Digit: Representing Numbers up to 1000
	PM1.07	3-Digit: Finding 10 More or 10 Less
	PM1.08	Finding 100 More or 100 Less
Topic Diagnostics: Number	MF00.01	Topic Diagnostic: Times Tables
	MF00.02	Topic Diagnostic: Calculations 1
	MF00.03	Topic Diagnostic: Calculations 2
	MF00.04	Topic Diagnostic: Negative Numbers
	MF00.05	Topic Diagnostic: Decimals
	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator
	MF00.07	Topic Diagnostic: Fractions

Topic Diagnostics: Number	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction
	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division
	MF00.10	Topic Diagnostic: Fractions of an Amount
	MF00.11	Topic Diagnostic: Factors, Multiples and Primes
	MF00.12	Topic Diagnostic: LCM and HCF 1
	MF00.13	Topic Diagnostic: Percentages
	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages
	MF00.15	Topic Diagnostic: Bounds 1
	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest
	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse
	MF00.18	Topic Diagnostic: Powers and Roots
	MF00.19	Topic Diagnostic: Laws of Indices 1
	MF00.20	Topic Diagnostic: Standard Form
Topic Diagnostics: Ratio and Proportion	MF00.21	Topic Diagnostic: Ratio
	MF00.22	Topic Diagnostic: Ratio: Sharing 1
	MF00.23	Topic Diagnostic: Proportion
	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1
Topic Diagnostics: Algebra	MF00.25	Topic Diagnostic: Simple Algebra
	MF00.26	Topic Diagnostic: Expanding and Factorising Single Brackets
	MF00.27	Topic Diagnostic: Expanding and Factorising Double Brackets
	MF00.28	Topic Diagnostic: Solving Linear Equations 1
	MF00.29	Topic Diagnostic: Solving Linear Equations 2

Topic Diagnostics: Algebra	MF00.30	Topic Diagnostic: Solving Simultaneous Linear Equations
	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1
	MF00.32	Topic Diagnostic: Formulae
	MF00.33	Topic Diagnostic: Sequences
	MF00.34	Topic Diagnostic: Inequalities
	MF00.35	Topic Diagnostic: Solving Inequalities 1
Topic Diagnostics: Graphs	MF00.36	Topic Diagnostic: Coordinates
	MF00.37	Topic Diagnostic: Straight Line Graphs 1
	MF00.38	Topic Diagnostic: Quadratic Graphs 1
	MF00.39	Topic Diagnostic: Other Graphs 1
Topic Diagnostics: Geometry	MF00.40	Topic Diagnostic: 2D and 3D Shapes
	MF00.41	Topic Diagnostic: Angles
	MF00.42	Topic Diagnostic: Angle Rules
	MF00.43	Topic Diagnostic: Angles in Parallel Lines
	MF00.44	Topic Diagnostic: Angles in Polygons
	MF00.45	Topic Diagnostic: Perimeter
	MF00.46	Topic Diagnostic: Area
	MF00.47	Topic Diagnostic: Circles: Circumference
	MF00.48	Topic Diagnostic: Circles: Area
	MF00.49	Topic Diagnostic: Volume 1
	MF00.50	Topic Diagnostic: Surface Area

Topic Diagnostics: Geometry	MF00.51	Topic Diagnostic: Reflection, Rotation and Translation
	MF00.52	Topic Diagnostic: Enlargements and Mixed Transformations 1
	MF00.53	Topic Diagnostic: Vectors
	MF00.54	Topic Diagnostic: Constructions and Loci
	MF00.55	Topic Diagnostic: Similarity 1
	MF00.56	Topic Diagnostic: Pythagoras' Theorem
	MF00.57	Topic Diagnostic: Right-Angled Trigonometry
	MF00.58	Topic Diagnostic: Scale Drawings and Bearings
Topic Diagnostics: Measures	MF00.59	Topic Diagnostic: Measures 1
	MF00.60	Topic Diagnostic: Measures 2
	MF00.61	Topic Diagnostic: Measures of Time
	MF00.62	Topic Diagnostic: Conversions
	MF00.63	Topic Diagnostic: Compound Measures: Speed
	MF00.64	Topic Diagnostic: Compound Measures: Density
Topic Diagnostics: Probability	MF00.65	Topic Diagnostic: Probability 1
	MF00.66	Topic Diagnostic: Tree Diagrams 1
	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1
Topic Diagnostics: Statistics	MF00.68	Topic Diagnostic: Collecting Data
	MF00.69	Topic Diagnostic: Displaying Data
	MF00.70	Topic Diagnostic: Averages and the Range
	MF00.71	Topic Diagnostic: Averages and the Range from a Frequency Table

Simple Arithmetic	MF1.01	Addition
	PM10.11	Single Digit Addition
	MF1.02	Subtraction
	MF1.03	Addition and Subtraction
	PM10.12	2 Digit Addition
	PM10.13	Single Digit Subtraction
	PM10.14	2 Digit Subtraction
	PM2.01	3-Digit: Adding and Subtracting 1s
	PM2.02	3-Digit: Adding and Subtracting 10s
	PM2.03	3-Digit: Adding and Subtracting 100s
	PM2.04	3-Digit: Column Addition (no Exchanging)
	PM2.05	3-Digit: Column Addition (with Exchanging)
	PM2.06	3-Digit: Column Subtraction (no Exchanging)
	PM2.07	3-Digit: Column Subtraction (with Exchanging)
	PM2.08	3-Digit: Addition and Subtraction Practice 1
	PM2.09	3-Digit: Addition and Subtraction Word Problems 1
Multiplication and Division	PM10.05	Multiplying by 2
	PM3.01	Multiplying by 3
	PM3.02	Multiplying by 4

Multiplication and Division	PM10.06	Multiplying by 5
	PM3.17	Multiplying by 6
	PM3.18	Multiplying by 7
	PM3.03	Multiplying by 8
	PM3.19	Multiplying by 9
	PM10.07	Multiplying by 10
	PM3.09	Multiplying Multiples of 10
	PM3.20	Multiplying by 11
	PM3.21	Multiplying by 12
	MF1.04	Times Tables: 2, 5 and 10
	MF1.05	Times Tables: 3 and 4
	MF1.06	Times Tables: 6 and 7
	MF1.07	Times Tables: 8 and 9
	MF1.08	Times Tables: 11 and 12
	PM3.22	Mixed Multiplication (Within the Times Tables)
	PM10.08	Dividing by 2
	PM3.05	Dividing by 3
	PM3.06	Dividing by 4
	PM10.09	Dividing by 5

Multiplication and Division	PM3.23	Dividing by 6
	PM3.24	Dividing by 7
	PM3.07	Dividing by 8
	PM3.25	Dividing by 9
	PM10.10	Dividing by 10
	PM3.26	Dividing by 11
	PM3.27	Dividing by 12
	PM3.28	Mixed Division (Within the Times Tables)
	PM4.12	Dividing and Multiplying by 10 and 100 (Including Decimals)
	MF1.11	Division: 1, 2, 3, 4, 5 and 10
	MF1.12	Division: 6, 7, 8, 9, 11 and 12
	MF1.13	Division: Mixed
	MF1.14	Distributive Law
	MF1.09	Commutative Law
	MF1.10	Associative Law
Understanding Number	PM1.09	Comparing Numbers with Greater Than and Less Than Symbols <>
	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
	MF2.05	Adding Negatives
	MF2.06	Subtracting Negatives

Understanding Number	MF2.07	Negatives and Positives
	MF2.08	Ordering Integers
	PM1.10	Ordering Numbers up to 1000
	PM1.21	2dp: Recognising Place Value in Decimals
	MF2.09	Ordering Decimals
	MF2.10	Ordering Negatives
	MF2.11	Multiplying by Powers of Ten
	MF2.12	Dividing by Powers of Ten
	MF2.13	Rounding to the nearest 10, 100 and 1000
	PM1.11	Reading and Writing Numbers up to 1000
Four Operations	MF3.01	Column Addition
	MF3.02	Column Subtraction
	MF3.03	Addition and Subtraction: Worded Questions
	MF3.04	Multiplying Negatives
	MF3.05	Dividing Negatives
	MF3.06	Multiplying and Dividing with Negatives
	MF3.07	Column Multiplication
	MF3.08	Grid Multiplication
	MF3.09	Multiplication with Napier's Bones
	MF3.10	Testing for Divisibility
	MF3.11	Short Division
	MF3.19	Long Division

Four Operations	MF3.12	Dividing by Multi-Digit Numbers
	MF3.13	Multiplication and Division: Worded Questions
	MF3.14	BIDMAS Introduction
	MF3.15	BIDMAS Intermediate
	MF3.16	BIDMAS Advanced
	MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
	MF3.18	Using a Calculator 2: Multiple Numbers
Working with Fractions	PM4.01	Identifying Fractions
	MB1.21	Recognising a Half and a Quarter
	MF4.01	Expressing Fractions
	MF4.02	Ordering Fractions
	MF4.03	Equivalent Fractions
	MF4.04	Simplifying Fractions
	MF4.05	Shading Fractions
	MF4.06	Mixed and Improper Fractions
	MF4.07	Adding Fractions 1: Same Denominator
	MF4.08	Adding Fractions 2: Convert 1 Denominator
	MF4.09	Adding Fractions 3: Convert 1 Denominator (Sum >1)
	MF4.10	Adding Fractions 4: Convert all Denominators
	MF4.36	Fractions: Subtracting from 1
	MF4.11	Subtracting Fractions
	MF4.12	Adding and Subtracting Fractions

Working with Fractions	MF4.13	Adding Improper Fractions
	MF4.14	Adding Mixed Numbers
	MF4.15	Adding Improper Fractions and Mixed Numbers
	MF4.16	Subtracting Improper Fractions
	MF4.17	Subtracting Mixed Numbers
	MF4.18	Subtracting Improper Fractions and Mixed Numbers
	MF4.19	Adding and Subtracting Improper Fractions
	MF4.20	Adding and Subtracting Mixed Numbers
	MF4.21	Adding and Subtracting Improper Fractions and Mixed Numbers
	MF4.37	Fractions on a Number Line 1: Between 0 and 1
	MF4.38	Fractions on a Number Line 2: Beyond 1
	MF4.22	Reciprocals
	MF4.23	Multiplying Fractions 1
	MF4.24	Multiplying Fractions 2
	MF4.25	Dividing Fractions
	MF4.26	Multiplying and Dividing Mixed Numbers
	MF4.27	Multiplying with Whole Numbers and Fractions
	MF4.28	Dividing with Whole Numbers and Fractions
	PM4.06	Finding Unit Fractions of Amounts
	MF4.39	Fraction of Amounts: Modelling
	MF4.29	Fraction of Amounts: Non-Calculator
	MF4.30	Fraction of Amounts: Calculator

	MF4.31	Increasing and Decreasing by Fractions
	MF4.40	Fraction of Amounts: Modelling Finding the Whole
Working with Fractions	MF4.32	Reverse Fractions
	MF4.33	Reverse Fractions: Worded Questions
	MF4.34	Estimating Products of Fractions
	MF4.35	Dividing Fractions (Bar Model)
	PM4.03	Comparing and Ordering Fractions
	MF5.01	Odds and Evens with Addition and Subtraction
	MF5.02	Odds and Evens with Multiplication
	MF5.03	Primes
	MF5.04	Multiples
	MF5.05	Factors
	MF5.06	Multiples and Factors
	MF5.07	Lowest Common Multiple - Listing Technique
Factors, Multiples and Primes	MF5.08	Highest Common Factor - Listing Technique
	MF5.09	Prime Factorisation 1: Factor Tree Given
	MF5.10	Prime Factorisation 2
	MF5.11	Uses of Prime Factorisation
	MF5.12	HCF Using Prime Factorisation: Venn Diagrams
	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors
	MF5.14	LCM Using Prime Factorisation: Venn Diagrams
	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors
	MF5.16	HCF and LCM with Prime Factorisation

	MF6.01	Decimal Place Value
	MF6.02	Adding Decimals 1: Calculations
	MF6.03	Adding Decimals 2: Worded Problems
	MF6.04	Subtracting Decimals 1: Calculations
	MF6.05	Subtracting Decimals 2: Worded Problems
	MF6.06	Multiplying Decimals 1
	MF6.07	Multiplying Decimals 2
Working with Decimals	MF6.08	Multiplying Decimals: Worded Questions
	MF6.09	Dividing Decimals
	MF6.10	Dividing Decimals by Decimals
	MF6.11	Dividing by Large Numbers
	MF6.12	Manipulating Decimal Calculations with Multiplication
	MF6.13	Manipulating Decimal Calculations with Division
	MF6.14	Multiplying Decimals with Napier's Bones
	MF7.01	Understanding Percentages
	MF7.02	Finding 50%
	MF7.03	Finding 25%
Introduction to Percentages (NC)	MF7.04	Finding 10%
	MF7.05	Finding 5%
	MF7.06	Finding 1%
	MF7.07	Finding Multiples of Tens in Percentages
	MF7.15	Percentages of Amounts: Modelling

Introduction to Percentages (NC)	MF7.08	Finding Percentages of Amounts 1
	MF7.09	Finding Percentages of Amounts 2
	MF7.10	Finding Percentages of Amounts 3
	MF7.11	Comparing Percentages 1: Multiples of 5%
	MF7.12	Comparing Percentages 2
	MF7.13	Finding Decimal Percentages
	MF7.14	Estimate with Percentages
Fractions, Decimals and Percentages	MF8.01	Introduction to Fractions, Decimals and Percentages
	MF8.02	Converting Fractions to Denominator 100
	MF8.03	Fractions to Percentage
	MF8.04	Decimals to Percentage
	MF8.05	Percentage to Decimals
	MF8.06	Fractions to Decimals 1: Equivalent Fractions
	MF8.07	Fractions to Decimals 2: Division
	MF8.08	Percentage to Fractions
	MF8.09	Decimals to Fractions
	MF8.10	Fractions to Decimals (Calculator)
	MF8.11	Fractions to Percentages (Calculator)
	MF8.12	Percentage to Fractions (Calculator)
	MF8.13	Decimals to Fractions (Calculator)
	MF8.14	Ordering Fractions, Decimals and Percentages 1: Unit Fractions (Non-Calculator)

Fractions, Decimals and Percentages	MF8.15	Ordering Fractions, Decimals and Percentages 2: Non-Unit Fractions (Non-Calculator)
	MF8.16	Ordering Fractions, Decimals and Percentages 3: Numbers Less than 1 (Calculator)
	MF8.17	Ordering Fractions, Decimals and Percentages 4: Numbers More than 1 (Calculator)
	MF8.18	Converting Percentage (Less than 1%)
	MF8.19	Converting Percentage (Greater than 100%)
Rounding	MF9.01	Rounding to the Nearest Whole Number
	MF9.02	Rounding to 1 Decimal Place
	MF9.03	Rounding to 2 Decimal Places
	MF9.04	Rounding to Mixed Decimal Places
	MF9.05	Rounding to 1 Significant Figure
	MF9.06	Rounding to 2 Significant Figures
	MF9.07	Rounding to 3 Significant Figures
	MF9.08	Rounding to Mixed Significant Figures
	MF9.09	Mixed Rounding
	MF9.10	Rounding to Appropriate Degrees of Accuracy
	MF9.11	Introduction to Estimation
	MF9.12	Estimation
	MF9.13	Bounds 1: Introduction
	MF9.14	Bounds 2: Simple Calculation
	MF9.15	Bounds 3: Intervals

Percentages Non-Calculator	MF10.06	Percentage Increase and Decrease: Modelling
	MF10.01	Percentage Increase
	MF10.02	Percentage Decrease
	MF10.03	Percentage Increase and Decrease
	MF10.04	Finding Percentages greater than 100
	MF10.05	Simple Interest
Percentages Calculator	MF11.01	Finding Percentages 1: Integer Percentages < 100% (Calculator)
	MF11.02	Finding Percentages 2: > 100% or Non-Integer Percentages (Calculator)
	MF11.03	Percentage Increase and Decrease (Calculator)
	MF11.04	Percentage Change
	MF11.05	Repeated Percentage Increase and Decrease (Calculator)
	MF11.06	Simple Interest (Calculator)
	MF11.07	Compound Interest (Calculator)
	MF11.08	Depreciation (Calculator)
	MF11.09	Compound Interest and Depreciation (Calculator)
	MF11.10	Simple and Compound Interest (Calculator)
	MF11.18	Reverse Percentages Introduction: Modelling
	MF11.19	Reverse Percentages: Modelling
	MF11.11	Reverse Percentage
	MF11.12	Percentage Error
	MF11.13	Express One Amount as a Percentage of Another
	MF11.14	Percentage Problems

Powers and Roots	MF12.01	Squares
	MF12.02	Cubes
	MF12.03	Squaring and Cubing Negatives
	MF12.04	Powers
	MF12.05	Roots of Squares and Cubes
	MF12.06	Roots
Indices	MF13.01	Powers of 0 and 1
	MF13.02	Raising a Fraction to a Power
	MF13.03	Multiplying Indices
	MF13.04	Dividing Indices
	MF13.05	Power of a Power
	MF13.06	Negative Indices
	MF13.07	Combination of Indices
Standard Form	MF14.01	The Positive Powers of 10
	MF14.02	The Negative Powers of 10
	MF14.03	Standard Form to Ordinary
	MF14.04	Ordinary to Standard Form
	MF14.05	Fixing into Standard Form
	MF14.06	Ordering Standard Form
	MF14.07	Adding and Subtracting with Standard Form
	MF14.08	Multiplying with Standard Form
	MF14.09	Dividing with Standard Form

Standard Form	MF14.10	Standard Form: Worded problems with calculator

Ratio	MF15.01	Introduction to Ratio
	MF15.02	Simplifying Ratios
	MF15.03	Converting Ratios into the Form 1:n
	MF15.04	Converting Ratios into the Form n:1
	MF15.05	3 Part Ratios
	MF15.06	Simplifying Ratios with Units
	MF15.15	Sharing with a Given Ratio: Modelling
	MF15.16	Ratio Fluency: Modelling
	MF15.07	Sharing with a Given Ratio 1
	MF15.08	Sharing with a Given Ratio 2 (Calculator)
	MF15.09	Sharing with a Given Ratio 3 (Calculator): Working Backwards
	MF15.10	Sharing with a Given Ratio 4 (Calculator): 3 Part Ratios
	MF15.11	Converting Ratios into Fractions
	MF15.12	Converting Fractions into Ratios
	MF15.13	Part of a Ratio to the Whole
	MF15.14	Ratio and Algebra
	MF15.17	Ratio: Problem Solving
	MF15.18	Ratio: Two Ratios
	MF15.19	Ratio: Angles
	MF15.20	Ratio: Applied

Ratio and Proportion	MF16.01	Introduction to Proportion
	MF16.02	Recipe Ratio 1: Find Amount of Ingredients
	MF16.03	Recipe Ratio 2: Find the Number of People
	MF16.04	Better Value
	MF16.05	Direct Proportion 1: Conversions
	MF16.06	Direct Proportion 2: $y = kx$
	MF16.07	Inverse Proportion 1: Introduction
	MF16.08	Inverse Proportion 2: $y = k/x$
	MF16.09	Proportions on a Graph
	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence

Introduction to Algebra	MF17.01	Forming Algebraic Expressions: One Step
	MF17.02	Forming Algebraic Expressions: Two Step
	MF17.03	Algebraic Terminology
	MF17.04	Collecting Like Terms 1: Add and Subtract
	MF17.05	Collecting Like Terms 2: Add and Subtract (Including Squared/Cubed Variables)
	MF17.06	Collecting Like Terms 3: In Context (Perimeter)
	MF17.07	Simplifying Expressions 1: Multiplication
	MF17.08	Simplifying Expressions 2: Multiplication (In Context)
	MF17.09	Simplifying Expressions 3: Division
	MF17.10	Simplifying Expressions 4: Division
	MF17.11	Simplifying Expressions 5: Multiplication and Division
	MF17.12	Function Machines

	MF17.13	Substitution into Expressions 1: One Term
	MF17.14	Substitution into Expressions 2: Two Terms
Introduction to Algebra	MF17.15	Substitution into Expressions 3: Two Terms incl. Squares
	MF17.16	Substitution into Expressions 4: Calculator
	MF18.25	Expanding Single Brackets: Introduction
	MF18.01	Expanding Single Brackets 1: a(x ± b)
	MF18.02	Expanding Single Brackets 2: ±a(x ± b)
	MF18.03	Expanding Single Brackets 3: ±a(±bx ± cy)
	MF18.04	Expanding Single Brackets 4: ±x(±y ± a)
	MF18.05	Expanding Single Brackets 5: Mixed
	MF18.06	Expanding and Simplifying
	MF18.07	Factorising into a Single Bracket 1: x ± a or a ± x
Expanding and Factorising	MF18.08	Factorising into a Single Bracket 2: ax ± bx
	MF18.09	Factorising into a Single Bracket 3: $axy(bx^2 ± cx ± d)$
	MF18.10	Expanding Double Brackets 1: (x ± a)(x ± b)
	MF18.11	Expanding Double Brackets 2: (ax ± b)(cx ± d)
	MF18.12	Expanding Double Brackets 3: $(x ± a)^2$
	MF18.13	Expanding Double Brackets 4: a(bx ± c)(dx ± e)
	MF18.14	Expanding Double Brackets 5: $a(bx ± c)^2$
	MF18.15	Factorising Quadratics 1: (x + a)(x + b)
	MF18.16	Factorising Quadratics 2: (x ± a)(x ± b)
	MF18.17	The Difference of Two Squares

	MF19.30	Solving Equations: One Step Modelling (+ −)
	MF19.01	Solving Equations: One Step (+ −)
	MF19.31	Solving Equations: One Step Modelling (× ÷)
	MF19.02	Solving Equations: One Step (×)
	MF19.03	Solving Equations: One Step (÷)
	MF19.04	Solving Equations: One Step (+ − × ÷)
	MF19.32	Solving Equations: Two Steps Modelling (×)
	MF19.33	Solving Equations: Two Steps Modelling (÷)
	MF19.05	Solving Equations: Two Steps (× ÷)
	MF19.06	Solving Equations: Two Steps ax + b = c
	MF19.07	Solving Equations: Two Steps ax − b = c
Solving Linear Equations	MF19.08	Solving Equations: Two Steps (x/a) ± b = c
	MF19.09	Solving Equations: Two Steps (x ± a)/b = c
	MF19.10	Solving Equations: Two Steps (Unknown as Denominator)
	MF19.11	Solving Equations: Two Steps (Negative Unknown)
	MF19.12	Solving Equations: Two Steps (Mixed Exercise)
	MF19.13	Solving Equations: Three Steps (Unknown on One Side)
	MF19.14	Solving Equations: Three Steps (Including Brackets)
	MF19.15	Solving Equations: Three Steps (Unknown on Both Sides)
	MF19.16	Solving Equations: Four Steps (Including Expanding)
	MF19.17	Solving Equations: Four Steps (Including Fractions)
	MF19.18	Generating Equations from Words

Solving Linear Equations	MF19.19	Generating Equations from Diagrams
	MF19.20	Simultaneous Equations: Introduction
	MF19.21	Simultaneous Equations 1
	MF19.22	Simultaneous Equations 2: Scale One Equation
	MF19.23	Simultaneous Equations 3: Scale Both Equations
	MF19.24	Simultaneous Equations 4: Rearranging
	MF19.25	Simultaneous Equations: Substitution
	MF19.26	Simultaneous Equations: Worded Questions
Solving Quadratic Equations	MF20.01	Solving Quadratics 1: $x^2 + b = 0$
	MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$
	MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$
	MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)
Formulae	MF21.01	Generating Formulae
	MF21.02	Substituting into a Formula
	MF21.03	Using Kinematics
	MF21.04	Recalling and Using Formulae 1
	MF21.05	Rearranging Formulae: One Step
	MF21.06	Rearranging Formulae: Two Step
	MF21.07	Rearranging Formulae: Negative Subject
	MF21.08	Rearranging Formulae: Unknown in Denominator
	MF21.09	Rearranging Formulae: With Powers
	MF21.10	Rearranging Formulae: Unknown on Both Sides

Sequences	MF22.01	Continuing Sequences
	MF22.02	Linear Sequences: Finding the Term-to-Term Rule
	MF22.03	Linear Sequences: Using the Term-to-Term Rule
	MF22.04	Linear Sequences with Diagrams 1: Term-to-Term Rule
	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
	MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)
	MF22.08	Linear Sequences: Finding the nth Term 2 (Decreasing)
	MF22.09	Linear Sequences with Diagrams 2: nth Term
	MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
	MF22.11	Important Sequences: Geometric
	MF22.12	Important Sequences: Fibonacci
	MF22.13	Quadratic Sequences: Using the nth Term
Straight Line Graphs	MF23.01	Understanding Coordinates: 1st Quadrant
	MF23.02	Understanding Coordinates: 4 Quadrants
	MF23.26	Coordinates and 2D Shapes
	MF23.03	Midpoint of a Line Segment
	MF23.04	Horizontal and Vertical Graphs
	MF23.05	Other Important Linear Graphs
	MF23.06	Plotting Straight Line Graphs: 1st Quadrant
	MF23.07	Plotting Straight Line Graphs: 4 Quadrants
	MF23.08	Finding the Gradient of a Line Segment: Using the Graph

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Straight Line Graphs	MF23.09	Finding the Gradient of a Line Segment: Using the Formula
	MF23.10	Understanding $y = mx + c$
	MF23.11	Graphing $y = mx + c$ (1)
	MF23.12	Graphing $y = mx + c$ (2)
	MF23.13	Finding $y = mx + c$ from a Gradient and a Point
	MF23.14	Finding $y = mx + c$ from Two Points
	MF23.15	Rearranging $y = mx + c$
	MF23.16	Finding Parallel Lines
	MF23.17	Solving Using Straight Line Graphs
	MF23.18	Solving Simultaneous Equations Using Straight Line Graphs 1: Graphs Given
	MF23.19	Solving Simultaneous Equations Using Straight Line Graphs 2: Graphs Not Given
Quadratic and Other Graphs	MF24.01	Plotting Simple Quadratic Graphs 1: $y = ax^2 + c$
	MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$
	MF24.03	Quadratic Graphs: Finding the y-intercept
	MF24.04	Quadratic Graphs: Finding the Line of Symmetry
	MF24.05	Quadratic Graphs: Finding the Turning Point
	MF24.06	Quadratic Graphs: Finding the Roots
	MF24.07	Plotting Other Polynomial Graphs
	MF24.08	Plotting Reciprocal Graphs
	MF24.09	Recognising Key Graphs
	MF24.10	Approximate Solutions Using a Graph

Quadratic and Other Graphs	MF24.11	Real Life Graphs: Plotting
	MF24.12	Real Life Graphs: Interpreting
Inequalities	MF25.01	Representing Inequalities on a Number Line
	MF25.02	Representing Two Sided Inequalities on a Number Line
	MF25.03	Interpreting Inequalities from a Number Line
	MF25.04	Interpreting Two Sided Inequalities from a Number Line
	MF25.05	Finding Integer Solutions to Inequalities
	MF25.06	Solving Inequalities: One Step
	MF25.07	Solving Inequalities: Negative Variable
	MF25.08	Solving Inequalities: Two Step
	MF25.09	Solving Inequalities: One Step and Two Sided
	MF25.10	Solving Inequalities: Multi Step and Two Sided
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides
	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line
Introduction to Geometry	MF26.01	Key Terms in 2D Geometry
	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
	MF26.02	Key Terms in 3D Geometry
	PM8.05	Identifying Angles
	MF26.03	Types of Angles 1: Diagrams
	MF26.04	Types of Angles 2: Numbers
	MF26.05	Parallel and Perpendicular Lines

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	MF26.06	Naming 2D Shapes
	MF26.07	Types of Triangles 1: Diagrams
	MF26.08	Types of Triangles 2: Words
	MF26.09	Types of Quadrilateral
	MF26.10	Naming 3D Shapes
Introduction to Geometry	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)
	MF26.12	Measuring Angles 2: Angles < 180°
	MF26.13	Measuring Angles 3: Angles > 180°
	MF26.14	Estimating Angles
	MF26.15	Drawing Angles
	MF26.16	Using a Ruler
	MF27.01	Straight Line Angles 1: Multiples of 5°
	MF27.02	Straight Line Angles 2
	MF27.03	Straight Line Angles with Algebra
	MF27.04	Angles Around a Point 1: Multiples of 5°
	MF27.05	Angles Around a Point 2
Angles	MF27.06	Angles Around a Point with Algebra
	MF27.07	Vertically Opposite Angles
	MF27.08	Alternate Angles
	MF27.09	Corresponding Angles
	MF27.10	Co-interior Angles
	MF27.11	Angles in Parallel Lines 1

Angles	MF27.12	Angles in Parallel Lines 2
	MF28.01	Angles in a Triangle 1
	MF28.02	Angles in a Triangle 2: Isosceles Triangles
	MF28.03	Angles in a Triangle 3: Including Angles on a Straight Line
	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
Angles in Polygons	MF28.05	Angles in Quadrilaterals
	MF28.06	Introduction to Angles in Polygons
	MF28.07	Interior Angles 1: Sum of Interior Angles
	MF28.08	Interior Angles 2: Angles in Regular Shapes
	MF28.09	Interior Angles in Irregular Shapes
	MF28.10	Exterior Angles
	MF28.11	Using Multiple Rules with Angles in Polygons
	MF29.01	Rotational Symmetry
	MF29.02	Reflective Symmetry
	MA2.06	Identifying 2D Shapes
	PM8.01	Describing 2D Shapes
2D Shapes	MF29.03	Quadrilateral Facts
	MF29.04	Polygon Facts
	MF29.05	Naming the Parts of a Circle
	MF29.06	Congruence
	MF29.07	Congruent Triangles

Perimeter	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
Area	MF31.01	Area by Counting Squares
	MF31.02	Estimating Area
	MF31.03	Area of Squares, Rectangles and Parallelograms
	MF31.04	Area of Right Angled Triangles
	MF31.05	Area of Triangles
	MF31.06	Area of Composite Shapes 1: Adding
	MF31.07	Area of Trapeziums
	MF31.08	Area of Composite Shapes 2: Subtracting
	MF31.09	Area and Algebra
Circles	MF32.01	Circumference: From Radius
	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter
	MF32.05	Perimeter of Part Circles
	MF32.06	Perimeter of Composite Shapes with Part Circles
	MF32.07	Area of a Circle: From Radius

Circles	MF32.08	Area of a Circle: From Diameter
	MF32.09	Area of a Circle
	MF32.10	Using the Area of a Circle to find the Radius or Diameter
	MF32.11	Areas of Part Circles
	MF32.12	Areas of Composite Shapes with Part Circles
	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MF32.15	Area of a Sector 1
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1
3D Shapes	PM8.02	Describing 3D Shapes
	MF33.01	Planes of Symmetry
	MF33.02	Nets of Cubes
	MF33.03	Plans and Elevations with Cuboids
	MF33.04	Plans and Elevations
Volume	MF34.01	Counting Cubes
	MF34.02	Volume of Cubes and Cuboids
	MF34.03	Volume of Cubes and Cuboids with Missing Side(s)
	MF34.04	Volume of Prisms 1: Given Area
	MF34.05	Volume of Prisms 2: Triangular Prisms
	MF34.06	Volume of Prisms 3: Mixed Exercise
	MF34.07	Volume of Cylinders
	MF34.08	Volume of Cylinders with a Missing Value

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	MF34.09	Volume of Part Cylinders
	MF34.10	Volume of a Sphere
	MF34.11	Volume of a Sphere with the Radius Missing
Volume	MF34.12	Volume of a Cone
	MF34.13	Volume of a Cone with the Radius Missing
	MF34.14	Volume of a Hemisphere
	MF34.15	Volume of Pyramids
	MF34.16	Volume of Composite Solids
	MF35.01	Surface Area of Cuboids
	MF35.02	Surface Area of Prisms
	MF35.03	Surface Area of Cylinders
Surface Area	MF35.04	Surface Area of Part Cylinders
	MF35.05	Surface Area of Spheres
	MF35.06	Surface Area of Cones
	MF35.07	Surface Area of Pyramids
	MF35.08	Surface Area of Composite Solids
	MF36.01	Reading Scales
	MF36.02	Metric Units
	MF36.03	Estimating with Metric Units
Measure	MF36.04	Converting Metric Length (One Step)
	MF36.05	Converting Metric Length (Multi-Step)
	MF36.06	Converting Metric Length: Worded Questions

	MF36.07	Converting Metric Mass (One Step)
	MF36.08	Converting Metric Mass (Multi-Step)
	MF36.09	Converting Metric Mass: Worded Questions
	MF36.10	Converting Metric Capacity
	MF36.11	Converting Metric Volume 1
	MF36.12	Converting Metric Volume 2
	MF36.13	Converting Area 2: Unit Conversions
	MF36.14	Converting Area 1: Area Model
	MF36.15	Converting Volume
	MF36.16	Metric and Imperial Length (No Calculator)
Measure	MF36.17	Metric and Imperial Length (Calculator)
	MF36.18	Metric and Imperial Mass and Volume (No Calculator)
	MF36.19	Metric and Imperial Mass and Volume (Calculator)
	MF36.20	Conversion Graphs: Drawing
	MF36.21	Conversion Graphs: Interpreting
	MF36.22	Conversion Graphs: Units of Measure
	PM5.01	Units of Measure
	PM5.02	Length
	PM5.03	Solving Length Problems
	PM5.04	Mass and Weight
	PM5.05	Solving Mass Problems
	PM5.06	Volume and Capacity

Measure	PM5.07	Solving Volume and Capacity Problems
	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter
Time and Money	PM7.01	Units of Time
	PM7.02	Times of Day
	PM7.03	Telling the Time in Words
	MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past
	PM7.04	Telling the Time to the Nearest 5 Minutes
	MF37.02	Reading a 12-Hour Clock 2: Multiples of 5
	MF37.03	Reading a 12-Hour Clock 3: Mixed
	MF37.04	Converting Time: AM and PM
	MF37.05	Converting Time: Seconds, Minutes and Hours
	MF37.06	Converting Time: Days, Weeks and Years
	MF37.07	Calendar Months
	MF37.08	Converting Time: Mixed Units
	MF37.09	Problems with Time
	MF37.10	Converting Currency 1
	MF37.11	Converting Currency 2: Double Conversions
	MF37.12	Converting Currency: Mixed Problems
	MC2.05	Money 2: Exam-Style Questions
	MB2.01	Money 3: Coins and Notes Problems
Compound Measure	MF38.01	Finding Speed (SDT)

Compound Measure	MF38.02	Finding Speed with Conversions (SDT)
	MF38.03	Finding Distance (SDT)
	MF38.04	Finding Distance with Conversions (SDT)
	MF38.05	Finding Time (SDT)
	MF38.06	Finding Time with Conversions (SDT)
	MF38.07	Speed, Distance and Time: Mixed Questions
	MF38.08	Converting Units with Speed, Distance and Time
	MF38.09	Understanding and Converting Units (DMV)
	MF38.10	Finding Density (DMV)
	MF38.11	Finding Density with Conversions (DMV)
	MF38.12	Finding Mass (DMV)
	MF38.13	Finding Mass with Conversions (DMV)
	MF38.14	Finding Volume (DMV)
	MF38.15	Finding Volume with Conversions (DMV)
	MF38.16	Density, Mass and Volume: Mixed Questions
	MF38.17	Converting Units with Density, Mass and Volume
	MF38.18	Force, Pressure and Area
	MF38.19	Distance-Time Graphs: Drawing
	MF38.20	Distance-Time Graphs: Interpreting
	MF38.21	Distance-Time Graphs: Speed
Scale Drawings and Bearings	MF39.01	Using Scales with Units
	MF39.02	Finding Scales with Units

Scale Drawings and Bearings	MF39.03	Using Scales without Units
	MF39.04	Finding Scales without Units
	MF39.05	Using Scales on a Map
	MF39.10	Creating Scale Diagrams
	MF39.06	Introduction to Bearings
	MF39.07	Bearings from North
	MF39.08	Finding Bearings 1
	MF39.09	Finding Bearings 2: Using Co-interior Angles
Transformations	MF40.01	Introduction to Reflection
	MF40.02	Finding the Line of Reflection
	MF40.03	Coordinates in Reflection
	MF40.04	Translating a Point
	MF40.05	Translating a Shape
	MF40.06	Describing Translations
	MF40.07	Enlarging Shapes
	MF40.08	Enlargements with 0<SF<1
	MF40.09	Enlargement with Centre (0,0)
	MF40.10	Enlargement with Centre (x,y)
	MF40.11	Enlargement with Fractional Scale Factor (0,0)
	MF40.12	Enlargement with Fractional Scale Factor (x,y)
	MF40.13	Describing Enlargements with an Integer Scale Factor
	MF40.14	Describing Enlargements with a Non-Integer Scale Factor

Transformations	MF40.15	Rotation with Centre (0,0)
	MF40.16	Rotation with Centre (x,y)
	MF40.17	Describing Rotation
	MF40.18	Describing Transformations
	MF40.19	Combination of Transformations 1
Vectors	MF41.01	Column Vectors
	MF41.02	Column Vectors: Scalar Multiplication
	MF41.03	Column Vectors: Addition and Subtraction
	MF41.04	Column Vectors: Drawing
	MF41.05	Geometric Vectors 1: One Term
	MF41.06	Geometric Vectors 2: Two Terms
Construction and Loci	MF42.01	Constructing Circles
	MF42.02	Constructing an Equilateral Triangle
	MI42.10	Constructing Triangles
	MF42.03	Perpendicular Bisector
	MF42.04	Angle Bisector
	MF42.05	Perpendicular from a Point to a Line
	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)
	MF42.07	Understanding Loci
	MF42.08	Loci 1: Single Constructions
	MF42.09	Loci 2: Multi-Step Problems

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Similarity	MF43.01	Introduction to Similarity
	MF43.02	Similar Polygons: Finding the Scale Factor
	MF43.03	Similar Polygons: Missing Sides given Scale Factor
	MF43.04	Similar Polygons: Missing Sides
	MF43.05	Similar Triangles 1: Same Orientation
	MF43.06	Similar Triangles 2: Different Orientations
Pythagoras	MF44.01	Pythagoras' Theorem
	MF44.02	Pythagoras: Finding the Hypotenuse
	MF44.03	Pythagoras: Finding a Short Side
	MF44.04	Pythagoras: Mixed Sides
	MF44.05	Pythagoras: Using Coordinates
	MF44.06	Pythagoras: Worded Questions
	MF44.07	Pythagoras: Applied Questions
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA
	MF45.02	Trigonometry: Using a Calculator
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)
	MF45.05	Trigonometry: Missing Angle
	MF45.06	Trigonometry: Worded Questions
	MF45.07	Exact Trigonometric Values
	MF45.08	Trigonometry and Pythagoras

Probability	MF46.01	Probability Scale in Words
	MF46.02	Probability Scale in Numbers
	MF46.03	Calculating Probability
	MF46.04	Mutually Exclusive Events
	MF46.05	Two Way Tables: Probability
	MF46.06	Listing Outcomes
	MF46.07	Sample Spaces
	MF46.08	Relative Frequency
	MF46.09	Expected Frequency
	MF46.10	Frequency Trees
	MF46.11	Interpreting Frequency Trees
	MF46.12	Multiplication Law of Probability (AND)
	MF46.13	Addition Law of Probability (OR)
	MF46.14	Tree Diagrams 1: Completing Diagrams
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)
Sets and Venn Diagrams	MF47.01	Set Notation
	MF47.02	Elements in a Set 1: Identifying Elements
	MF47.03	Elements in a Set 2: Unions and Intersections
	MF47.04	Elements in a Set 3: Complements
	MF47.05	Introduction to Venn Diagrams

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Sets and Venn Diagrams	MF47.06	Constructing Venn Diagrams 1: Listing Elements
	MF47.07	Constructing Venn Diagrams 2: Writing Values
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)
Collecting Data	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
	MF48.03	Tally Chart
	MF48.04	Questionnaires
	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples
	MF48.07	Grouped Tally Charts: Discrete and Continuous
Analysing Data	MF49.01	Mode
	MF49.02	Median
	MF49.03	Mean 1: Positive Integers
	MF49.04	Mean 2: Decimals and Negatives
	MF49.05	Mean 3: Finding Missing Values
	MF49.06	Mean 4: Changing Means
	MF49.07	Range 1: Positive Integers
	MF49.08	Range 2: Decimals and Negatives
	MF49.09	Applying Averages and the Range 1: Raw Data

Analysing Data	MF49.10	Mode from Frequency Table
	MF49.11	Median from Frequency Table
	MF49.12	Mean from Frequency Table
	MF49.13	Range from Frequency Table
	MF49.14	Modal Class from Grouped Frequency Table
	MF49.15	Median from Grouped Frequency Table
	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data
	MF49.18	Range from Grouped Frequency Table
	MF49.19	Applying Averages and the Range 2: Tables
	MF49.20	Using Averages and Range
	MF49.21	Using Averages and Range: Comparing Two Data Sets
Displaying Data	MF50.01	Completing Two Way Tables
	MF50.02	Interpreting Two Way Tables
	MF50.03	Pictograms
	MF50.04	Bar Charts
	MF50.05	Multiple and Composite Bar Charts
	MF50.06	Vertical Line Graphs
	MF50.07	Creating Stem and Leaf Diagrams
	MF50.08	Interpreting Stem and Leaf Diagrams
	MF50.09	Creating Pie Charts (No Calculator)
	MF50.10	Creating Pie Charts (Calculator)

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Displaying Data

MF50.11	Interpreting Pie Charts
MF50.12	Time Series Graphs
MF50.13	Drawing Scatter Graphs
MF50.14	Interpreting Scatter Graphs 1: Introduction
MF50.15	Interpreting Scatter Graphs 2: Outliers
MF50.16	Frequency Polygons: Drawing
MF50.17	Frequency Polygons: Interpreting
MF50.18	Interpreting Misleading Data Representations
PM9.01	Pictograms
PM9.02	Tables 1
PM9.03	Bar Charts 1

Course Content

Mathematics IGCSE: Edexcel Foundation & Higher

Course Mathematics IGCSE: Edexcel (F)

Diagnostics 81   **Strands** 59   **Nuggets** 658

Course Mathematics IGCSE: Edexcel (H)

Diagnostics 131   **Strands** 72   **Nuggets** 929

These courses cover all the content required at secondary (KS3 and KS4) for those targeting the Edexcel Foundation or Higher IGCSE.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

(H) **Higher Only**

Strand	Nuggets	Course
Diagnostics	10	
Higher Diagnostics	12	
Topic Diagnostics: Number	20	
Topic Diagnostics: Ratio and Proportion	6	
Topic Diagnostics: Algebra	21	
Topic Diagnostics: Graphs	10	
Topic Diagnostics: Geometry	27	
Topic Diagnostics: Measures	7	
Topic Diagnostics: Probability	5	
Topic Diagnostics: Statistics	6	
Simple Arithmetic	14	
Understanding Number	13	
Four Operations	19	
Working with Fractions	41	
Factors, Multiples and Primes	20	
Working with Decimals	14	
Introduction to Percentages (NC)	15	
Fractions, Decimals and Percentages	19	
Recurring Decimals	8	
Rounding	23	
Percentages Non-Calculator	6	
Percentages Calculator	16	
Powers and Roots	7	
Surds	16	
Indices	15	
Standard Form	10	
Ratio	22	
Ratio and Proportion	16	
Introduction to Algebra	18	
Expanding and Factorising	25	
Solving Linear Equations	30	
Solving Quadratic Equations	14	
Completing the Square	9	

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CENTURY   89

Algebraic Fractions	13		Vectors	14
Formulae	11		Construction and Loci	6
Algebraic Proof	4		Similarity	10
Functions	19		Pythagoras	7
Sequences	18		Right-Angled Trigonometry	8
Straight Line Graphs	24		Advanced Trigonometry	18
Quadratic and Other Graphs	32		3D Trigonometry	5
Inequalities	21		Probability	26
Calculus	10 Ⓗ		Sets and Venn Diagrams	22
Introduction to Geometry	16		Collecting Data	7
Angles	12		Analysing Data	20
Angles in Polygons	11		Displaying Data	11
2D Shapes	6		Cumulative Frequency and Box Plots	8
Perimeter	6		Histograms	12
Area	9			
Circles	19			
3D Shapes	2			
Volume	18			
Surface Area	9			
Measure	22			
Time and Money	12			
Compound Measure	25			
Scale Drawings and Bearings	10			
Transformations	20			
Circle Theorems	16			

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Ⓗ **Higher Only**

Strand	Code	Nugget Name	Course
Diagnostics	MF0.01	Diagnostic: Number 1	
	MF0.02	Diagnostic: Algebra 1	
	MF0.30	Diagnostic: Ratio and Proportion 1	
	MF0.03	Diagnostic: Geometry 1	
	MI0.20	Diagnostic: Number 2	Ⓗ

Diagnostic	MF0.05	Diagnostic: Probability 1	
	MI0.21	Diagnostic: Statistics 1	(H)
	MF0.07	Diagnostic: Algebra 2	
	MF0.31	Diagnostic: Ratio and Proportion 2	
	MF0.08	Diagnostic: Geometry 2	
Higher Diagnostics	MI0.22	Diagnostic: Number 3	(H)
	MI0.23	Diagnostic: Number 4	(H)
	MI0.24	Diagnostic: Algebra 3	(H)
	MI0.25	Diagnostic: Algebra 4	(H)
	MI0.26	Diagnostic: Algebra 5	(H)
	MH0.32	Diagnostic: Ratio and Proportion 3	(H)
	MI0.27	Diagnostic: Geometry 3	(H)
	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	(H)
	MI0.28	Diagnostic: Statistics 2	(H)
	MI0.29	Diagnostic: Probability 2	(H)
	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	(H)
	MI0.19	Diagnostic: Calculus	(H)
Topic Diagnostics: Number	MF00.01	Topic Diagnostic: Times Tables	
	MF00.02	Topic Diagnostic: Calculations 1	
	MF00.03	Topic Diagnostic: Calculations 2	
	MF00.04	Topic Diagnostic: Negative Numbers	
	MF00.05	Topic Diagnostic: Decimals	

Topic Diagnostics: Number	MH00.01	Topic Diagnostic: Rounding and Estimating	(H)
	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator	
	MF00.07	Topic Diagnostic: Fractions	
	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction	
	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division	
	MF00.10	Topic Diagnostic: Fractions of an Amount	
	MF00.11	Topic Diagnostic: Factors, Multiples and Primes	
	MF00.12	Topic Diagnostic: LCM and HCF 1	
	MH00.02	Topic Diagnostic: LCM and HCF 2	(H)
	MF00.13	Topic Diagnostic: Percentages	
	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages	
	MH00.03	Topic Diagnostic: Recurring Decimals	(H)
	MI00.07	Topic Diagnostic: Bounds 1	
	MH00.04	Topic Diagnostic: Bounds 2	(H)
	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest	
	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse	
	MF00.18	Topic Diagnostic: Powers and Roots	
	MH00.06	Topic Diagnostic: Surds	(H)
	MF00.19	Topic Diagnostic: Laws of Indices 1	
	MH00.07	Topic Diagnostic: Laws of Indices 2	(H)
	MH00.08	Topic Diagnostic: Fractional Indices	(H)
	MF00.20	Topic Diagnostic: Standard Form	

Topic Diagnostics: Ratio and Proportion	MF00.21	Topic Diagnostic: Ratio	
	MF00.22	Topic Diagnostic: Ratio: Sharing 1	
	MH00.10	Topic Diagnostic: Ratio: Sharing 2	(H)
	MF00.23	Topic Diagnostic: Proportion	
	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	
	MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	(H)
Topic Diagnostics: Algebra	MF00.25	Topic Diagnostic: Simple Algebra	
	MF00.26	Topic Diagnostic: Expanding and Factorising Single Brackets	
	MF00.27	Topic Diagnostic: Expanding and Factorising Double Brackets	
	MH00.12	Topic Diagnostic: Factorising Non-monic Quadratics	(H)
	MF00.28	Topic Diagnostic: Solving Linear Equations 1	
	MF00.29	Topic Diagnostic: Solving Linear Equations 2	
	MF00.30	Topic Diagnostic: Solving Simultaneous Linear Equations	
	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
	MH00.14	Topic Diagnostic: The Quadratic Formula	(H)
	MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	(H)
	MH00.16	Topic Diagnostic: Completing the Square	(H)
	MH00.17	Topic Diagnostic: Algebraic Fractions	(H)
	MF00.32	Topic Diagnostic: Formulae	
	MH00.18	Topic Diagnostic: Algebraic Proof	(H)
	MH00.19	Topic Diagnostic: Functions	(H)
	MH00.20	Topic Diagnostic: Composite Functions	(H)

Topic Diagnostics: Algebra	MH00.21	Topic Diagnostic: Inverse Functions	(H)
	MF00.33	Topic Diagnostic: Sequences	
	MF00.34	Topic Diagnostic: Inequalities	
	MF00.35	Topic Diagnostic: Solving Inequalities 1	
	MH00.23	Topic Diagnostic: Solving Inequalities 2	(H)
Topic Diagnostics: Graphs	MF00.36	Topic Diagnostic: Coordinates	
	MF00.37	Topic Diagnostic: Straight Line Graphs 1	
	MI00.14	Topic Diagnostic: Straight Line Graphs 2	(H)
	MH00.25	Topic Diagnostic: Inequality Regions	(H)
	MF00.38	Topic Diagnostic: Quadratic Graphs 1	
	MH00.26	Topic Diagnostic: Quadratic Graphs 2	(H)
	MF00.39	Topic Diagnostic: Other Graphs 1	
	MI00.16	Topic Diagnostic: Other Graphs 2	(H)
	MH00.28	Topic Diagnostic: Trigonometric Graphs	(H)
	MH00.29	Topic Diagnostic: Graph Transformations	(H)
Topic Diagnostics: Geometry	MI00.09	Topic Diagnostic: 2D and 3D Shapes	
	MF00.41	Topic Diagnostic: Angles	
	MF00.42	Topic Diagnostic: Angle Rules	
	MF00.43	Topic Diagnostic: Angles in Parallel Lines	
	MF00.44	Topic Diagnostic: Angles in Polygons	
	MF00.45	Topic Diagnostic: Perimeter	
	MF00.46	Topic Diagnostic: Area	

Topic Diagnostics: Geometry	MF00.47	Topic Diagnostic: Circles: Circumference	
	MF00.48	Topic Diagnostic: Circles: Area	
	MH00.30	Topic Diagnostic: Circles: Arcs and Sectors	(H)
	MF00.49	Topic Diagnostic: Volume 1	
	MH00.31	Topic Diagnostic: Volume 2	(H)
	MF00.50	Topic Diagnostic: Surface Area	
	MF00.51	Topic Diagnostic: Reflection, Rotation and Translation	
	MF00.52	Topic Diagnostic: Enlargements and Mixed Transformations 1	
	MH00.33	Topic Diagnostic: Circle Theorems	(H)
	MF00.53	Topic Diagnostic: Vectors	
	MH00.34	Topic Diagnostic: Geometric Vectors	(H)
	MI00.10	Topic Diagnostic: Constructions and Loci	
	MF00.55	Topic Diagnostic: Similarity 1	
	MH00.35	Topic Diagnostic: Similarity 2	(H)
	MF00.56	Topic Diagnostic: Pythagoras' Theorem	
	MF00.57	Topic Diagnostic: Right-Angled Trigonometry	
	MH00.36	Topic Diagnostic: Sine and Cosine Rules	(H)
	MH00.37	Topic Diagnostic: Mixed Trigonometry	(H)
	MH00.38	Topic Diagnostic: 3D Pythagoras and Trigonometry	(H)
	MF00.58	Topic Diagnostic: Scale Drawings and Bearings	
Topic Diagnostics: Measures	MF00.59	Topic Diagnostic: Measures 1	
	MF00.60	Topic Diagnostic: Measures 2	
	MF00.61	Topic Diagnostic: Measures of Time	

Topic Diagnostics: Measures	MF00.62	Topic Diagnostic: Conversions	
	MF00.63	Topic Diagnostic: Compound Measures: Speed	
	MF00.64	Topic Diagnostic: Compound Measures: Density	
	MI00.15	Topic Diagnostic: Velocity-time Graphs	(H)
Topic Diagnostics: Probability	MI00.11	Topic Diagnostic: Probability 1	
	MF00.66	Topic Diagnostic: Tree Diagrams 1	
	MH00.41	Topic Diagnostic: Tree Diagrams 2	(H)
	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	(H)
Topic Diagnostics: Statistics	MF00.68	Topic Diagnostic: Collecting Data	
	MI00.13	Topic Diagnostic: Displaying Data	
	MF00.70	Topic Diagnostic: Averages and the Range	
	MI00.12	Topic Diagnostic: Averages and the Range from a Frequency Table	
	MH00.43	Topic Diagnostic: Cumulative Frequency	(H)
	MH00.45	Topic Diagnostic: Histograms	(H)
Simple Arithmetic	MF1.01	Addition	
	MF1.02	Subtraction	
	MF1.03	Addition and Subtraction	
	MF1.04	Times Tables: 2, 5 and 10	
	MF1.05	Times Tables: 3 and 4	
	MF1.06	Times Tables: 6 and 7	
	MF1.07	Times Tables: 8 and 9	
	MF1.08	Times Tables: 11 and 12	

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Simple Arithmetic	MF1.09	Commutative Law
	MF1.10	Associative Law
	MF1.11	Division: 1, 2, 3, 4, 5 and 10
	MF1.12	Division: 6, 7, 8, 9, 11 and 12
	MF1.13	Division: Mixed
	MF1.14	Distributive Law
Understanding Number	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
	MF2.05	Adding Negatives
	MF2.06	Subtracting Negatives
	MF2.07	Negatives and Positives
	MF2.08	Ordering Integers
	MF2.09	Ordering Decimals
	MF2.10	Ordering Negatives
	MF2.11	Multiplying by Powers of Ten
	MF2.12	Dividing by Powers of Ten
	MF2.13	Rounding to the nearest 10, 100 and 1000
Four Operations	MF3.01	Column Addition
	MF3.02	Column Subtraction
	MF3.03	Addition and Subtraction: Worded Questions
	MF3.04	Multiplying Negatives

Four Operations	MF3.05	Dividing Negatives
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	MF3.09	Multiplication with Napier's Bones
	MF3.10	Testing for Divisibility
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	MF3.14	BIDMAS Introduction
	MF3.15	BIDMAS Intermediate
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	MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
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	MF4.06	Mixed and Improper Fractions
	MF4.07	Adding Fractions 1: Same Denominator
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	MF5.12	HCF Using Prime Factorisation: Venn Diagrams
	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors
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	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors
	MF5.16	HCF and LCM with Prime Factorisation
	MH5.17	HCF and LCM of 3 Numbers
	MH5.18	Solving Problems with HCF and LCM 1 (H)
	MH5.19	Solving Problems with HCF and LCM 2 (H)
	MH5.20	Solving Problems with HCF and LCM 3: Reverse (H)

Factors, Multiples and Primes

	MF6.01	Decimal Place Value
	MF6.02	Adding Decimals 1: Calculations
	MF6.03	Adding Decimals 2: Worded Problems
	MF6.04	Subtracting Decimals 1: Calculations
	MF6.05	Subtracting Decimals 2: Worded Problems
	MF6.06	Multiplying Decimals 1
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	MF6.08	Multiplying Decimals: Worded Questions
	MF6.09	Dividing Decimals
	MF6.10	Dividing Decimals by Decimals
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	MF6.12	Manipulating Decimal Calculations with Multiplication
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	MF7.01	Understanding Percentages
	MF7.02	Finding 50%
	MF7.03	Finding 25%
	MF7.04	Finding 10%
	MF7.05	Finding 5%
	MF7.06	Finding 1%
	MF7.07	Finding Multiples of Tens in Percentages
	MF7.15	Percentages of Amounts: Modelling
	MF7.08	Finding Percentages of Amounts 1
	MF7.09	Finding Percentages of Amounts 2
	MF7.10	Finding Percentages of Amounts 3
	MF7.11	Comparing Percentages 1: Multiples of 5%
	MF7.12	Comparing Percentages 2
	MF7.13	Finding Decimal Percentages
	MF7.14	Estimate with Percentages

Introduction to Percentages (NC)

	MF8.01	Introduction to Fractions, Decimals and Percentages
	MF8.02	Converting Fractions to Denominator 100
	MF8.03	Fractions to Percentage
	MF8.04	Decimals to Percentage
	MF8.05	Percentage to Decimals
	MF8.06	Fractions to Decimals 1: Equivalent Fractions
	MF8.07	Fractions to Decimals 2: Division

Fractions, Decimals and Percentages

Fractions, Decimals and Percentages		
MF8.08	Percentage to Fractions	
MF8.09	Decimals to Fractions	
MF8.10	Fractions to Decimals (Calculator)	
MF8.11	Fractions to Percentages (Calculator)	
MF8.12	Percentage to Fractions (Calculator)	
MF8.13	Decimals to Fractions (Calculator)	
MF8.14	Ordering Fractions, Decimals and Percentages 1: Unit Fractions (Non-Calculator)	
MF8.15	Ordering Fractions, Decimals and Percentages 2: Non-Unit Fractions (Non-Calculator)	
MF8.16	Ordering Fractions, Decimals and Percentages 3: Numbers Less than 1 (Calculator)	
MF8.17	Ordering Fractions, Decimals and Percentages 4: Numbers More than 1 (Calculator)	
MF8.18	Converting Percentage (Less than 1%)	
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Recurring Decimals		
MH51.01	Fractions to Recurring Decimals 1: Special Cases	(H)
MH51.02	Fractions to Recurring Decimals 2: Long Division	(H)
MH51.03	Fractions to Recurring Decimals 3: Long Division (Numbers > 1)	(H)
MH51.04	Recurring Decimals 1: 1 – 2 Digits	(H)
MH51.05	Recurring Decimals 2: 2 – 4 Digits	(H)
MH51.06	Recurring Decimals 3: Non-Recurring and Recurring Digits	(H)
MH51.07	Recurring Decimals 4: Special Cases	(H)
MH51.08	Recurring Decimals 5: Calculations	(H)

Rounding		
MF9.01	Rounding to the Nearest Whole Number	
MF9.02	Rounding to 1 Decimal Place	
MF9.03	Rounding to 2 Decimal Places	
MF9.04	Rounding to Mixed Decimal Places	
MF9.05	Rounding to 1 Significant Figure	
MF9.06	Rounding to 2 Significant Figures	
MF9.07	Rounding to 3 Significant Figures	
MF9.08	Rounding to Mixed Significant Figures	
MF9.09	Mixed Rounding	
MF9.10	Rounding to Appropriate Degrees of Accuracy	
MF9.11	Introduction to Estimation	
MF9.12	Estimation	
MF9.13	Bounds 1: Introduction	
MF9.14	Bounds 2: Simple Calculation	
MH9.16	Bounds 4: Addition	(H)
MH9.17	Bounds 5: Subtraction	(H)
MH9.18	Bounds 6: Multiplication	(H)
MH9.19	Bounds 7: Division	(H)
MH9.20	Bounds 8: Mixed Operations	(H)
MH9.21	Bounds 9: Formulae	(H)
MH9.22	Bounds 10: Suitable Degrees of Accuracy	(H)
MH9.23	Bounds 11: Discrete Variables	(H)
MH9.24	Truncation	(H)

Percentages Non-Calculator	MF10.06	Percentage Increase and Decrease: Modelling	
	MF10.01	Percentage Increase	
	MF10.02	Percentage Decrease	
	MF10.03	Percentage Increase and Decrease	
	MF10.04	Finding Percentages greater than 100	
	MF10.05	Simple Interest	
Percentages Calculator	MF11.01	Finding Percentages 1: Integer Percentages < 100% (Calculator)	
	MF11.02	Finding Percentages 2: > 100% or Non-Integer Percentages (Calculator)	
	MF11.03	Percentage Increase and Decrease (Calculator)	
	MF11.04	Percentage Change	
	MF11.05	Repeated Percentage Increase and Decrease (Calculator)	
	MF11.06	Simple Interest (Calculator)	
	MF11.07	Compound Interest (Calculator)	
	MF11.08	Depreciation (Calculator)	
	MF11.09	Compound Interest and Depreciation (Calculator)	
	MF11.10	Simple and Compound Interest (Calculator)	
	MF11.18	Reverse Percentages Introduction: Modelling	
	MF11.19	Reverse Percentages: Modelling	
	MF11.11	Reverse Percentage	
	MF11.12	Percentage Error	
	MF11.13	Express One Amount as a Percentage of Another	
	MF11.14	Percentage Problems	

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	MF12.02	Cubes	
	MF12.03	Squaring and Cubing Negatives	
	MF12.04	Powers	
	MF12.05	Roots of Squares and Cubes	
	MF12.06	Roots	
	MH12.07	Estimating Powers and Roots	(H)
Surds	MH52.01	Surds: Introduction	(H)
	MH52.02	Surds: Multiplication and Division	(H)
	MH52.03	Surds: Simplifying 1	(H)
	MH52.04	Surds: Simplifying 2 (Products of Surds)	(H)
	MH52.05	Surds: Simplifying 3 (Dividing Surds)	(H)
	MH52.06	Surds: Simplifying 4 (Sum and Difference)	(H)
	MH52.07	Surds: Expanding 1 (Single Bracket)	(H)
	MH52.08	Surds: Expanding 2 (Sum/Difference of Single Brackets)	(H)
	MH52.09	Surds: Expanding 3 (Double Brackets)	(H)
	MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	(H)
	MH52.11	Surds: Expanding 5 (Difference of Two Squares)	(H)
	MH52.12	Surds: Rationalising 1 (Monomial Denominator)	(H)
	MH52.13	Surds: Rationalising 2 (Binomial Denominator)	(H)
	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)	(H)
	MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)	(H)

Surds	MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)	(H)
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	MF13.02	Raising a Fraction to a Power	
	MF13.03	Multiplying Indices	
	MF13.04	Dividing Indices	
	MF13.05	Power of a Power	
	MF13.06	Negative Indices	
	MF13.07	Combination of Indices	
Indices	MH13.08	Fractional Indices 1: Square and Cube Root	(H)
	MH13.09	Fractional Indices 2: Non-Unit Fraction	(H)
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	MF14.02	The Negative Powers of 10	
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	MF14.05	Fixing into Standard Form	
	MF14.06	Ordering Standard Form	

Standard Form	MF14.07	Adding and Subtracting with Standard Form
	MF14.08	Multiplying with Standard Form
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	MF14.10	Standard Form: Worded problems with calculator
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	MF15.02	Simplifying Ratios
	MF15.03	Converting Ratios into the Form 1:n
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	MF15.15	Sharing with a Given Ratio: Modelling
	MF15.16	Ratio Fluency: Modelling
	MF15.07	Sharing with a Given Ratio 1
	MF15.08	Sharing with a Given Ratio 2 (Calculator)
	MF15.09	Sharing with a Given Ratio 3 (Calculator): Working Backwards
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	MF15.13	Part of a Ratio to the Whole
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Ratio	MF15.19	Ratio: Angles	
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Ratio and Proportion	MF16.01	Introduction to Proportion	
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	MF16.04	Better Value	
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	MF16.08	Inverse Proportion 2: y = k/x	
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	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence	
	MH16.10	Direct Proportion 3: $y = kx^a$ and $y = k\sqrt{x}$	(H)
	MH16.11	Inverse Proportion 3: $y = k/x^a$ and $y = k\sqrt{x}$	(H)
	MH16.12	Interpreting Direct and Inverse Proportion 1: $y = kx$ and $y = k/x^a$	(H)
	MH16.13	Interpreting Direct and Inverse Proportion 2: Problem Solving	(H)
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	MF17.04	Collecting Like Terms 1: Add and Subtract	
	MF17.05	Collecting Like Terms 2: Add and Subtract (Including Squared/Cubed Variables)	
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	MH20.06	Quadratic Formula 1: Identify A, B and C	(H)
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	MH20.10	Quadratic Formula 5: In Context	(H)
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Completing the Square	MH53.01	Completing the Square 1: $(x + q)^2 + r$	(H)
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	MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$	(H)
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Algebraic Fractions	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)	(H)
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Formulae	MF21.01	Generating Formulae	
	MF21.02	Substituting into a Formula	
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	MF21.04	Recalling and Using Formulae 1	
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	MF21.05	Rearranging Formulae: One Step	
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Algebraic Proof	MH55.01	Introduction to Algebraic Proof	(H)
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	MI56.19	Functions: Range	(H)
	MH56.02	Functions: Substitution 1 (Linear Functions)	(H)
	MH56.03	Functions: Substitution 2 (Quadratic Functions)	(H)

Functions	MH56.04	Functions: Substitution 3 (Challenge)	(H)
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	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)	(H)
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	MH56.09	Composite Functions: Substitution 3 (3 Functions)	(H)
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	MH56.11	Composite Functions: Solving	(H)
	MH56.12	Composite Functions: Algebraic	(H)
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	MH56.14	Inverse Functions 2: Non-Linear	(H)
	MH56.15	Inverse Functions: Substitution	(H)
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Sequences	MF22.01	Continuing Sequences	
	MF22.02	Linear Sequences: Finding the Term-to-Term Rule	
	MF22.03	Linear Sequences: Using the Term-to-Term Rule	
	MF22.04	Linear Sequences with Diagrams 1: Term-to-Term Rule	
	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)	
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	MI22.20	Sequences: $a + (n - 1)d$	

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Sequences

MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)
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MI22.21	Sum of Arithmetic Sequences 1
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MF22.09	Linear Sequences with Diagrams 2: nth Term
MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
MF22.11	Important Sequences: Geometric
MF22.12	Important Sequences: Fibonacci
MF22.13	Quadratic Sequences: Using the nth Term
MH22.14	Subscript Notation	(H)
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Straight Line Graphs

MF23.01	Understanding Coordinates: 1st Quadrant
MF23.02	Understanding Coordinates: 4 Quadrants
MF23.26	Coordinates and 2D Shapes
MF23.03	Midpoint of a Line Segment
MH23.20	Coordinates and Ratios	(H)
MF23.04	Horizontal and Vertical Graphs
MF23.05	Other Important Linear Graphs
MF23.06	Plotting Straight Line Graphs: 1st Quadrant
MF23.07	Plotting Straight Line Graphs: 4 Quadrants
MF23.08	Finding the Gradient of a Line Segment: Using the Graph

Straight Line Graphs

MF23.09	Finding the Gradient of a Line Segment: Using the Formula
MF23.10	Understanding $y = mx + c$
MF23.11	Graphing $y = mx + c$ (1)
MF23.12	Graphing $y = mx + c$ (2)
MF23.13	Finding $y = mx + c$ from a Gradient and a Point
MF23.14	Finding $y = mx + c$ from Two Points
MF23.15	Rearranging $y = mx + c$
MF23.16	Finding Parallel Lines
MH23.21	Finding Perpendicular Lines 1: Gradient	(H)
MH23.22	Finding Perpendicular Lines 2: Equation	(H)
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MF23.17	Solving Using Straight Line Graphs
MF23.18	Solving Simultaneous Equations Using Straight Line Graphs 1: Graphs Given
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Quadratic and Other Graphs

MF24.01	Plotting Simple Quadratic Graphs 1: $y = ax^2 + c$
MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$
MF24.03	Quadratic Graphs: Finding the y-intercept
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MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given	(H)

Quadratic and Other Graphs

MH24.14	Quadratic Graphs: Turning Point from Completing Square 2: $y = (x + q)^2 + r$ Not Given	(H)
MH24.15	Quadratic Graphs: Turning Point from Completing Square 3: $y = \pm p(x + q)^2 + r$ Not Given	(H)
MH24.16	Estimating Gradients	(H)
MH24.18	Trigonometric Functions: Sin Graph	(H)
MH24.19	Trigonometric Functions: Cos Graph	(H)
MH24.20	Trigonometric Functions: Tan Graph	(H)
MH24.37	Trigonometric Functions: Mixed	(H)
MF24.07	Plotting Other Polynomial Graphs	
MF24.08	Plotting Reciprocal Graphs	
MF24.09	Recognising Key Graphs	
MF24.10	Approximate Solutions Using a Graph	
MH24.24	Transforming Graphs: Translating Vertical	(H)
MH24.25	Transforming Graphs: Translating Horizontal	(H)
MH24.26	Transforming Graphs: Reflections	(H)
MH24.27	Transforming Graphs: Stretching y-direction	(H)
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MH24.29	Transforming Graphs: Mixed Translations	(H)
MH24.30	Transforming Graphs: Mixed Stretches	(H)
MH24.31	Transforming Graphs: Mixed	(H)
MH24.21	Transforming Graphs: Mixed (Trig Functions)	(H)
MH24.32	Transforming Graphs: Combined 1	(H)
MH24.33	Transforming Graphs: Combined 2	(H)

Quadratic and Other Graphs

MF24.11	Real Life Graphs: Plotting	
MF24.12	Real Life Graphs: Interpreting	
MH24.35	Quadratic Simultaneous Equations Graphically	(H)
MI24.37	Polynomial Simultaneous Equations Graphically	(H)

Inequalities

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MF25.02	Representing Two Sided Inequalities on a Number Line	
MF25.03	Interpreting Inequalities from a Number Line	
MF25.04	Interpreting Two Sided Inequalities from a Number Line	
MH25.13	Solving Quadratic Inequalities Graphically	(H)
MF25.05	Finding Integer Solutions to Inequalities	
MF25.06	Solving Inequalities: One Step	
MF25.07	Solving Inequalities: Negative Variable	
MF25.08	Solving Inequalities: Two Step	
MF25.09	Solving Inequalities: One Step and Two Sided	
MF25.10	Solving Inequalities: Multi Step and Two Sided	
MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides	
MF25.12	Solving Inequalities: Expressing Solutions on a Number Line	
MH25.14	Solving Inequalities: Quadratics 1	(H)
MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)	(H)
MH25.16	Solving Inequalities: Quadratics 3 (Factorising)	(H)
MH25.17	Solving Multiple Linear Inequalities	(H)

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	MH25.19	Regions 2: One Line of Form y = mx + c	(H)
	MH25.20	Regions 3: Multiple Vertical/Horizontal Lines	(H)
	MH25.21	Regions 4: Multiple Lines of Form y = mx + c	(H)
Calculus	MI62.01	Differentiating Functions 1: Single Term	(H)
	MI62.02	Differentiating Functions 2: Multiple Terms	(H)
	MI62.03	Differentiating Functions 3: Negative Powers	(H)
	MI62.04	Differentiating Functions 4: Involving Expanding	(H)
	MI62.05	Differentiating Functions: Gradient at a Point 1	(H)
	MI62.06	Differentiating Functions: Gradient at a Point 2	(H)
	MI62.07	Differentiating Functions: Turning Points 1	(H)
	MI62.08	Differentiating Functions: Turning Points 2	(H)
	MI62.09	Differentiating Functions: Problem Solving	(H)
	MI62.10	Differentiating Functions: Kinematics	(H)
Introduction to Geometry	MF26.01	Key Terms in 2D Geometry	
	MF26.02	Key Terms in 3D Geometry	
	MF26.03	Types of Angles 1: Diagrams	
	MF26.04	Types of Angles 2: Numbers	
	MF26.05	Parallel and Perpendicular Lines	
	MF26.06	Naming 2D Shapes	
	MF26.07	Types of Triangles 1: Diagrams	
	MF26.08	Types of Triangles 2: Words	

Introduction to Geometry	MF26.09	Types of Quadrilateral
	MF26.10	Naming 3D Shapes
	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)
	MF26.12	Measuring Angles 2: Angles < 180°
	MF26.13	Measuring Angles 3: Angles > 180°
	MF26.14	Estimating Angles
	MF26.15	Drawing Angles
	MF26.16	Using a Ruler
Angles	MF27.01	Straight Line Angles 1: Multiples of 5°
	MF27.02	Straight Line Angles 2
	MF27.03	Straight Line Angles with Algebra
	MF27.04	Angles Around a Point 1: Multiples of 5°
	MF27.05	Angles Around a Point 2
	MF27.06	Angles Around a Point with Algebra
	MF27.07	Vertically Opposite Angles
	MF27.08	Alternate Angles
	MF27.09	Corresponding Angles
	MF27.10	Co-interior Angles
	MF27.11	Angles in Parallel Lines 1
	MF27.12	Angles in Parallel Lines 2
Angles in Polygons	MF28.01	Angles in a Triangle 1
	MF28.02	Angles in a Triangle 2: Isosceles Triangles

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Angles in Polygons	MF28.03	Angles in a Triangle 3: Including Angles on a Straight Line
	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
	MF28.05	Angles in Quadrilaterals
	MF28.06	Introduction to Angles in Polygons
	MF28.07	Interior Angles 1: Sum of Interior Angles
	MF28.08	Interior Angles 2: Angles in Regular Shapes
	MF28.09	Interior Angles in Irregular Shapes
	MF28.10	Exterior Angles
	MF28.11	Using Multiple Rules with Angles in Polygons
2D Shapes	MF29.01	Rotational Symmetry
	MF29.02	Reflective Symmetry
	MF29.03	Quadrilateral Facts
	MF29.04	Polygon Facts
	MF29.05	Naming the Parts of a Circle
	MF29.06	Congruence
Perimeter	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
Area	MF31.01	Area by Counting Squares

Area	MF31.02	Estimating Area
	MF31.03	Area of Squares, Rectangles and Parallelograms
	MF31.04	Area of Right Angled Triangles
	MF31.05	Area of Triangles
	MF31.06	Area of Composite Shapes 1: Adding
	MF31.07	Area of Trapeziums
	MF31.08	Area of Composite Shapes 2: Subtracting
	MF31.09	Area and Algebra
Circles	MF32.01	Circumference: From Radius
	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter
	MF32.05	Perimeter of Part Circles
	MF32.06	Perimeter of Composite Shapes with Part Circles
	MF32.07	Area of a Circle: From Radius
	MF32.08	Area of a Circle: From Diameter
	MF32.09	Area of a Circle
	MF32.10	Using the Area of a Circle to find the Radius or Diameter
	MF32.11	Areas of Part Circles
	MF32.12	Areas of Composite Shapes with Part Circles
	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees

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Circles	MH32.17	Arc Length 3: Reverse	(H)
	MF32.15	Area of a Sector 1	
	MH32.18	Area of a Sector 2: Reverse	(H)
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1	
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving	(H)
3D Shapes	MF33.01	Planes of Symmetry	
	MF33.02	Nets of Cubes	
Volume	MF34.01	Counting Cubes	
	MF34.02	Volume of Cubes and Cuboids	
	MF34.03	Volume of Cubes and Cuboids with Missing Side(s)	
	MF34.04	Volume of Prisms 1: Given Area	
	MF34.05	Volume of Prisms 2: Triangular Prisms	
	MF34.06	Volume of Prisms 3: Mixed Exercise	
	MF34.07	Volume of Cylinders	
	MF34.08	Volume of Cylinders with a Missing Value	
	MF34.09	Volume of Part Cylinders	
	MF34.10	Volume of a Sphere	
	MF34.11	Volume of a Sphere with the Radius Missing	
	MF34.12	Volume of a Cone	
	MF34.13	Volume of a Cone with the Radius Missing	
	MF34.14	Volume of a Hemisphere	
	MF34.15	Volume of Pyramids	

Volume	MF34.16	Volume of Composite Solids	
	MH34.17	Problem Solving with Volume	(H)
	MH34.18	Volume of Frustums	(H)
Surface Area	MF35.01	Surface Area of Cuboids	
	MF35.02	Surface Area of Prisms	
	MF35.03	Surface Area of Cylinders	
	MF35.04	Surface Area of Part Cylinders	
	MF35.05	Surface Area of Spheres	
	MF35.06	Surface Area of Cones	
	MF35.07	Surface Area of Pyramids	
	MF35.08	Surface Area of Composite Solids	
	MH35.09	Problem Solving with Surface Area	(H)
Measure	MF36.01	Reading Scales	
	MF36.02	Metric Units	
	MF36.03	Estimating with Metric Units	
	MF36.04	Converting Metric Length (One Step)	
	MF36.05	Converting Metric Length (Multi-Step)	
	MF36.06	Converting Metric Length: Worded Questions	
	MF36.07	Converting Metric Mass (One Step)	
	MF36.08	Converting Metric Mass (Multi-Step)	
	MF36.09	Converting Metric Mass: Worded Questions	
	MF36.10	Converting Metric Capacity	

Measure	MF36.11	Converting Metric Volume 1
	MF36.12	Converting Metric Volume 2
	MF36.13	Converting Area 2: Unit Conversions
	MF36.14	Converting Area 1: Area Model
	MF36.15	Converting Volume
	MF36.16	Metric and Imperial Length (No Calculator)
	MF36.17	Metric and Imperial Length (Calculator)
	MF36.18	Metric and Imperial Mass and Volume (No Calculator)
	MF36.19	Metric and Imperial Mass and Volume (Calculator)
	MF36.20	Conversion Graphs: Drawing
	MF36.21	Conversion Graphs: Interpreting
	MF36.22	Conversion Graphs: Units of Measure
Time and Money	MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past
	MF37.02	Reading a 12-Hour Clock 2: Multiples of 5
	MF37.03	Reading a 12-Hour Clock 3: Mixed
	MF37.04	Converting Time: AM and PM
	MF37.05	Converting Time: Seconds, Minutes and Hours
	MF37.06	Converting Time: Days, Weeks and Years
	MF37.07	Calendar Months
	MF37.08	Converting Time: Mixed Units
	MF37.09	Problems with Time
	MF37.10	Converting Currency 1

Time and Money	MF37.11	Converting Currency 2: Double Conversions
	MF37.12	Converting Currency: Mixed Problems
Compound Measure	MF38.01	Finding Speed (SDT)
	MF38.02	Finding Speed with Conversions (SDT)
	MF38.03	Finding Distance (SDT)
	MF38.04	Finding Distance with Conversions (SDT)
	MF38.05	Finding Time (SDT)
	MF38.06	Finding Time with Conversions (SDT)
	MF38.07	Speed, Distance and Time: Mixed Questions
	MF38.08	Converting Units with Speed, Distance and Time
	MF38.09	Understanding and converting units (DMV)
	MF38.10	Finding Density (DMV)
	MF38.11	Finding Density with Conversions (DMV)
	MF38.12	Finding Mass (DMV)
	MF38.13	Finding Mass with Conversions (DMV)
	MF38.14	Finding Volume (DMV)
	MF38.15	Finding Volume with Conversions (DMV)
	MF38.16	Density, Mass and Volume: Mixed Questions
	MF38.17	Converting Units with Density, Mass and Volume
	MF38.18	Force, Pressure and Area
	MF38.19	Distance-Time Graphs: Drawing
	MF38.20	Distance-Time Graphs: Interpreting

Compound Measure	MF38.21	Distance-Time Graphs: Speed
	MH38.22	Velocity-Time Graph: Interpreting (H)
	MH38.23	Velocity-Time Graph: Distance (H)
	MH38.24	Velocity-Time Graph: Acceleration (H)
	MH38.25	Velocity-Time Graph: Problem Solving (H)
Scale Drawings and Bearings	MF39.01	Using Scales with Units
	MF39.02	Finding Scales with Units
	MF39.03	Using Scales without Units
	MF39.04	Finding Scales without Units
	MF39.05	Using Scales on a Map
	MF39.10	Creating Scale Diagrams
	MF39.06	Introduction to Bearings
	MF39.07	Bearings from North
	MF39.08	Finding Bearings 1
	MF39.09	Finding Bearings 2: Using Co-interior Angles
Transformations	MF40.01	Introduction to Reflection
	MF40.02	Finding the Line of Reflection
	MF40.03	Coordinates in Reflection
	MF40.04	Translating a Point
	MF40.05	Translating a Shape
	MF40.06	Describing Translations
	MF40.07	Enlarging Shapes

Transformations	MF40.08	Enlargements with 0<SF<1
	MF40.09	Enlargement with Centre (0,0)
	MF40.10	Enlargement with Centre (x,y)
	MF40.11	Enlargement with Fractional Scale Factor (0,0)
	MF40.12	Enlargement with Fractional Scale Factor (x,y)
	MF40.13	Describing Enlargements with an Integer Scale Factor
	MF40.14	Describing Enlargements with a Non-Integer Scale Factor
	MF40.15	Rotation with Centre (0,0)
	MF40.16	Rotation with Centre (x,y)
	MF40.17	Describing Rotation
	MF40.18	Describing Transformations
	MF40.19	Combination of Transformations 1
	MH40.24	Combination of Transformations 2 (H)
Circle Theorems	MH57.01	Angle in a Semicircle and Angle at Tangent (H)
	MH57.02	Properties of Diameter and Radii (H)
	MH57.03	Tangents from an External Point (H)
	MH57.04	Angles at the Centre (H)
	MH57.05	Angles on the Same Arc (H)
	MH57.06	Angles at the Centre and on the Same Arc (H)
	MH57.07	Cyclic Quadrilaterals (H)
	MH57.08	Alternate Segment Theorem (H)
	MI57.13	Intersecting Chord Theorem (H)

Circle Theorems	MI57.14	Intersecting Secant Theorem	(H)
	MH57.09	Mixed Circle Theorems 1: Practice	(H)
	MH57.10	Mixed Circle Theorems 2: Algebra	(H)
	MH57.11	Mixed Circle Theorems 3: Two Theorems	(H)
	MH57.12	Mixed Circle Theorems 4: Challenge	(H)
	MI57.15	Mixed Circle Theorems 5: Including Chord and Secant Theorems	(H)
	MI57.16	Mixed Circle Theorems 6: Challenge incl. Chord and Secant Theorems	(H)
Vectors	MF41.01	Column Vectors	
	MF41.02	Column Vectors: Scalar Multiplication	
	MF41.03	Column Vectors: Addition and Subtraction	
	MF41.04	Column Vectors: Drawing	
	MI41.14	Magnitude of Vectors	(H)
	MF41.05	Geometric Vectors 1: One Term	
	MF41.06	Geometric Vectors 2: Two Terms	
	MH41.07	Geometric Vectors 3: Within Shapes	(H)
	MH41.08	Geometric Vectors 4: Expand and Simplify	(H)
	MH41.09	Geometric Vectors 5: Midpoints	(H)
	MH41.10	Geometric Vectors 6: Ratios	(H)
	MH41.11	Geometric Vectors 7: Fractions and Ratios	(H)
	MH41.12	Geometric Vectors 8: Parallel Vectors	(H)
	MH41.13	Geometric Vectors 9: Proof	(H)

Construction and Loci	MF42.01	Constructing Circles	
	MF42.02	Constructing an Equilateral Triangle	
	MI42.10	Constructing Triangles	(H)
	MF42.03	Perpendicular Bisector	
	MF42.04	Angle Bisector	
	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)	
Similarity	MF43.01	Introduction to Similarity	
	MF43.02	Similar Polygons: Finding the Scale Factor	
	MF43.03	Similar Polygons: Missing Sides given Scale Factor	
	MF43.04	Similar Polygons: Missing Sides	
	MF43.05	Similar Triangles 1: Same Orientation	
	MF43.06	Similar Triangles 2: Different Orientations	
	MH43.07	Similar Area 1	(H)
	MH43.08	Similar Area 2: Including Ratio	(H)
	MH43.09	Similar Volume	(H)
	MH43.10	Similar Area and Volume	(H)
Pythagoras	MF44.01	Pythagoras' Theorem	
	MF44.02	Pythagoras: Finding the Hypotenuse	
	MF44.03	Pythagoras: Finding a Short Side	
	MF44.04	Pythagoras: Mixed Sides	
	MF44.05	Pythagoras: Using Coordinates	
	MF44.06	Pythagoras: Worded Questions	

Pythagoras	MF44.07	Pythagoras: Applied Questions	
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA	
	MF45.02	Trigonometry: Using a Calculator	
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)	
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)	
	MF45.05	Trigonometry: Missing Angle	
	MF45.06	Trigonometry: Worded Questions	
	MF45.07	Exact Trigonometric Values	
	MF45.08	Trigonometry and Pythagoras	
Advanced Trigonometry	MH58.01	Area using ½ (ab) sin (C): Proof	(H)
	MH58.02	½ (ab) sin (C): Finding the area	(H)
	MH58.03	½ (ab) sin (C): Area with Missing Value	(H)
	MH58.04	½ (ab) sin (C): Applied	(H)
	MH58.05	Sine Rule: Proof	(H)
	MH58.06	Sine Rule: Sides	(H)
	MH58.07	Sine Rule: Angles	(H)
	MH58.08	Sine Rule: Applied	(H)
	MH58.09	Cosine Rule: Proof	(H)
	MH58.10	Cosine Rule: Finding a	(H)
	MH58.11	Cosine Rule: Finding A	(H)
	MH58.12	Cosine Rule: Applied	(H)
	MH58.13	Choosing the Correct Trigonometric Rule	(H)

Advanced Trigonometry	MH58.14	Mixed Trigonometry 1	(H)
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems	(H)
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems	(H)
	MH58.17	Mixed Trigonometry 4: Non-Calculator	(H)
	MH58.18	Mixed Trigonometry 5: Bearings	(H)
3D Trigonometry	MH59.01	3D Pythagoras 1: Cuboids	(H)
	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	(H)
	MH59.03	3D SOH CAH TOA	(H)
	MH59.04	3D Trigonometry	(H)
	MH59.05	3D Trigonometry: Problem Solving	(H)
Probability	MF46.01	Probability Scale in Words	
	MF46.02	Probability Scale in Numbers	
	MF46.03	Calculating Probability	
	MF46.04	Mutually Exclusive Events	
	MF46.06	Listing Outcomes	
	MF46.07	Sample Spaces	
	MF46.08	Relative Frequency	
	MF46.09	Expected Frequency	
	MF46.10	Frequency Trees	
	MF46.11	Interpreting Frequency Trees	
	MF46.12	Multiplication Law of Probability (AND)	
	MF46.13	Addition Law of Probability (OR)	

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Probability	MH46.19	Addition Law of Probability (General OR)	(H)
	MF46.14	Tree Diagrams 1: Completing Diagrams	
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome	
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes	
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)	
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)	(H)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)	(H)
	MH46.22	Tree Diagrams 7: NOT Statements	(H)
	MH46.23	Tree Diagrams 8: Reverse	(H)
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)	(H)
	MH46.25	Tree Diagrams 10: Conditional Probability (Multiple Outcomes)	(H)
	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)	(H)
	MH46.27	Tree Diagrams 12: Algebraic Expressions	(H)
	MH46.28	Tree Diagrams 13: Solving Equations	(H)
Sets and Venn Diagrams	MF47.01	Set Notation	
	MF47.02	Elements in a Set 1: Identifying Elements	
	MF47.03	Elements in a Set 2: Unions and Intersections	
	MF47.04	Elements in a Set 3: Complements	
	MI47.22	Subsets: Introduction	(H)
	MI47.24	Subsets: Problem Solving	(H)
	MF47.05	Introduction to Venn Diagrams	

Sets and Venn Diagrams	MF47.06	Constructing Venn Diagrams 1: Listing Elements	
	MF47.07	Constructing Venn Diagrams 2: Writing Values	
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams	(H)
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams	
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)	(H)
	MH47.14	Venn Diagrams: Complements	(H)
	MH47.15	Venn Diagrams with Algebra	(H)
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams	
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)	
	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	(H)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)	(H)
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)	(H)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)	
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)	(H)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	(H)
Collecting Data	MF48.01	Hypotheses, Primary Data and Secondary Data	
	MF48.02	Discrete and Continuous Data	
	MF48.03	Tally Chart	
	MF48.04	Questionnaires	
	MF48.05	Types of Random Sampling	
	MF48.06	Fair Samples	

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Collecting Data	MF48.07	Grouped Tally Charts: Discrete and Continuous
Analysing Data	MF49.01	Mode
	MF49.02	Median
	MF49.03	Mean 1: Positive Integers
	MF49.04	Mean 2: Decimals and Negatives
	MF49.05	Mean 3: Finding Missing Values
	MF49.06	Mean 4: Changing Means
	MF49.07	Range 1: Positive Integers
	MF49.08	Range 2: Decimals and Negatives
	MF49.09	Applying Averages and the Range 1: Raw Data
	MF49.10	Mode from Frequency Table
	MF49.11	Median from Frequency Table
	MF49.12	Mean from Frequency Table
	MF49.13	Range from Frequency Table
	MF49.14	Modal Class from Grouped Frequency Table
	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data
	MF49.18	Range from Grouped Frequency Table
	MF49.19	Applying Averages and the Range 2: Tables
	MF49.20	Using Averages and Range
	MF49.21	Using Averages and Range: Comparing Two Data Sets

Displaying Data	MF50.03	Pictograms	
	MF50.04	Bar Charts	
	MF50.05	Multiple and Composite Bar Charts	
	MF50.06	Vertical Line Graphs	
	MF50.09	Creating Pie Charts (No Calculator)	
	MF50.10	Creating Pie Charts (Calculator)	
	MF50.11	Interpreting Pie Charts	
	MF50.12	Time Series Graphs	
	MF50.16	Frequency Polygons: Drawing	
	MF50.17	Frequency Polygons: Interpreting	
	MF50.18	Interpreting Misleading Data Representations	
Cumulative Frequency and Box Plots	MH60.01	Cumulative Frequency 1: Calculating	(H)
	MH60.02	Cumulative Frequency 2: Drawing	(H)
	MH60.03	Cumulative Frequency 3: Calculating Frequency	(H)
	MH60.04	Cumulative Frequency 4: Finding Values	(H)
	MH60.05	Cumulative Frequency 5: Median	(H)
	MH60.06	Cumulative Frequency 6: Quartiles	(H)
	MH60.07	Cumulative Frequency 7: Interquartile Range	(H)
	MH60.08	Cumulative Frequency 8: Plot and Evaluate	(H)
Histograms	MH61.01	Frequency Density 1: Calculating	(H)
	MH61.02	Frequency Density 2: Problem Solving	(H)
	MH61.03	Histograms 1: Choosing Axes	(H)

Histograms	MH61.04	Histograms 2: Plotting	(H)
	MH61.05	Histograms 3: Calculating Frequency	(H)
	MH61.06	Histograms 4: Calculating Frequency within a Given Range	(H)
	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)	(H)
	MH61.08	Histograms 6: Finding Fractions and Percentages	(H)
	MH61.09	Histograms 7: Finding Proportions	(H)
	MH61.10	Histograms 8: Median	(H)
	MH61.11	Histograms 9: Mean	(H)
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)	(H)

Course Content
Mathematics IGCSE: Cambridge Core & Extended

Course Mathematics IGCSE: Cambridge (Core)
Diagnostics 81 **Strands** 59 **Nuggets** 672

Course Mathematics IGCSE: Cambridge (Extended)
Diagnostics 138 **Strands** 72 **Nuggets** 991

These courses cover all content required at secondary (KS3 and KS4) for those targeting the Cambridge Core or Extended IGCSE.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Ⓒ **Core Only**   Ⓔ **Extended Only**

Strand	Nuggets	Course
Diagnostics	10	
Extended Diagnostics	12	
Topic Diagnostics: Number	29	
Topic Diagnostics: Ratio and Proportion	7	
Topic Diagnostics: Algebra	23	
Topic Diagnostics: Graphs	11	

Strand	Nuggets
Topic Diagnostics: Geometry	28
Topic Diagnostics: Measures	9
Topic Diagnostics: Probability	6
Topic Diagnostics: Statistics	9
Simple Arithmetic	14
Understanding Number	13
Four Operations	19
Working with Fractions	41
Factors, Multiples and Primes	20
Working with Decimals	14
Introduction to Percentages (NC)	15
Fractions, Decimals and Percentages	19
Recurring Decimals	8
Rounding	24
Percentages Non-Calculator	6
Percentages Calculator	20
Powers and Roots	7
Surds	16
Indices	24
Standard Form	10
Ratio	22
Ratio and Proportion	16
Introduction to Algebra	18
Expanding and Factorising	25

Solving Linear Equations	33	Scale Drawings and Bearings	10
Solving Quadratic Equations	14	Transformations	24
Completing the Square	9	Circle Theorems	16
Algebraic Fractions	13	Vectors	14
Formulae	11	Construction and Loci	10
Algebraic Proof	4	Similarity	10
Functions	19	Pythagoras	7
Sequences	22	Right-Angled Trigonometry	10
Straight Line Graphs	26	Advanced Trigonometry	18
Quadratic and Other Graphs	36	3D Trigonometry	5
Inequalities	23	Probability	28
Calculus	11 Ⓔ	Sets and Venn Diagrams	24
Introduction to Geometry	16	Collecting Data	7
Angles	12	Analysing Data	21
Angles in Polygons	11	Displaying Data	18
2D Shapes	7	Cumulative Frequency and Box Plots	15
Perimeter	6	Histograms	12
Area	9		
Circles	19		
3D Shapes	4		
Volume	18		
Surface Area	9		
Measure	22		
Time and Money	12		
Compound Measure	25		

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Ⓒ Core Only   Ⓔ Extended Only

Strand	Code	Nugget Name	Course
Diagnostics	MF0.01	Diagnostic: Number 1	
	MF0.02	Diagnostic: Algebra 1	
	MF0.30	Diagnostic: Ratio and Proportion 1	
	MF0.03	Diagnostic: Geometry 1	
	MF0.04	Diagnostic: Number 2	
	MF0.05	Diagnostic: Probability 1	
	MF0.06	Diagnostic: Statistics 1	
	MF0.07	Diagnostic: Algebra 2	
	MF0.31	Diagnostic: Ratio and Proportion 2	
	MF0.08	Diagnostic: Geometry 2	
Higher Diagnostics	MH0.09	Diagnostic: Number 3	Ⓔ
	MH0.10	Diagnostic: Number 4	Ⓔ
	MH0.11	Diagnostic: Algebra 3	Ⓔ
	MH0.12	Diagnostic: Algebra 4	Ⓔ
	MH0.13	Diagnostic: Algebra 5	Ⓔ
	MH0.32	Diagnostic: Ratio and Proportion 3	Ⓔ
	MH0.14	Diagnostic: Geometry 3	Ⓔ

Strand	Code	Nugget Name	Course
Higher Diagnostics	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	Ⓔ
	MH0.16	Diagnostic: Statistics 2	Ⓔ
	MH0.17	Diagnostic: Probability 2	Ⓔ
	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	Ⓔ
	MI0.19	Diagnostic: Calculus	Ⓔ
Topic Diagnostics: Number	MF00.01	Topic Diagnostic: Times Tables	
	MF00.02	Topic Diagnostic: Calculations 1	
	MF00.03	Topic Diagnostic: Calculations 2	
	MF00.04	Topic Diagnostic: Negative Numbers	
	MF00.05	Topic Diagnostic: Decimals	
	MH00.01	Topic Diagnostic: Rounding and Estimating	Ⓔ
	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator	
	MF00.07	Topic Diagnostic: Fractions	
	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction	
	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division	
	MF00.10	Topic Diagnostic: Fractions of an Amount	
	MF00.11	Topic Diagnostic: Factors, Multiples and Primes	
	MF00.12	Topic Diagnostic: LCM and HCF 1	
	MH00.02	Topic Diagnostic: LCM and HCF 2	Ⓔ
	MF00.13	Topic Diagnostic: Percentages	
	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages	
	MH00.03	Topic Diagnostic: Recurring Decimals	Ⓔ

Topic Diagnostics: Graphs

Code	Topic	
MI00.02	Topic Diagnostic: Coordinates	C
MF00.36	Topic Diagnostic: Coordinates	E
MF00.37	Topic Diagnostic: Straight Line Graphs 1	
MH00.24	Topic Diagnostic: Straight Line Graphs 2	E
MH00.25	Topic Diagnostic: Inequality Regions	E
MF00.38	Topic Diagnostic: Quadratic Graphs 1	
MH00.26	Topic Diagnostic: Quadratic Graphs 2	E
MF00.39	Topic Diagnostic: Other Graphs 1	
MH00.27	Topic Diagnostic: Other Graphs 2	E
MH00.28	Topic Diagnostic: Trigonometric Graphs	E
MH00.29	Topic Diagnostic: Graph Transformations	E

Topic Diagnostics: Geometry

Code	Topic	
MF00.40	Topic Diagnostic: 2D and 3D Shapes	
MF00.41	Topic Diagnostic: Angles	
MF00.42	Topic Diagnostic: Angle Rules	
MF00.43	Topic Diagnostic: Angles in Parallel Lines	
MF00.44	Topic Diagnostic: Angles in Polygons	
MF00.45	Topic Diagnostic: Perimeter	
MF00.46	Topic Diagnostic: Area	
MF00.47	Topic Diagnostic: Circles: Circumference	
MF00.48	Topic Diagnostic: Circles: Area	
MH00.30	Topic Diagnostic: Circles: Arcs and Sectors	E
MF00.49	Topic Diagnostic: Volume 1	

Topic Diagnostics: Geometry

Code	Topic	
MH00.31	Topic Diagnostic: Volume 2	E
MF00.50	Topic Diagnostic: Surface Area	
MF00.51	Topic Diagnostic: Reflection, Rotation and Translation	
MF00.52	Topic Diagnostic: Enlargements and Mixed Transformations 1	
MH00.32	Topic Diagnostic: Enlargements and Mixed Transformations 2	E
MH00.33	Topic Diagnostic: Circle Theorems	E
MF00.53	Topic Diagnostic: Vectors	
MH00.34	Topic Diagnostic: Geometric Vectors	E
MF00.54	Topic Diagnostic: Constructions and Loci	
MF00.55	Topic Diagnostic: Similarity 1	
MH00.35	Topic Diagnostic: Similarity 2	E
MF00.56	Topic Diagnostic: Pythagoras' Theorem	
MF00.57	Topic Diagnostic: Right-Angled Trigonometry	
MH00.36	Topic Diagnostic: Sine and Cosine Rules	E
MH00.37	Topic Diagnostic: Mixed Trigonometry	E
MH00.38	Topic Diagnostic: 3D Pythagoras and Trigonometry	E
MF00.58	Topic Diagnostic: Scale Drawings and Bearings	

Topic Diagnostics: Measures

Code	Topic	
MF00.59	Topic Diagnostic: Measures 1	
MI00.03	Topic Diagnostic: Measures 2	C
MF00.60	Topic Diagnostic: Measures 2	E
MF00.61	Topic Diagnostic: Measures of Time	
MF00.62	Topic Diagnostic: Conversions	

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Topic Diagnostics: Measures	MF00.63	Topic Diagnostic: Compound Measures: Speed	
	MI00.04	Topic Diagnostic: Compound Measures: Density	C
	MF00.64	Topic Diagnostic: Compound Measures: Density	E
	MH00.39	Topic Diagnostic: Velocity-time Graphs	E
Topic Diagnostics: Probability	MF00.65	Topic Diagnostic: Probability 1	
	MH00.40	Topic Diagnostic: Probability 2	E
	MF00.66	Topic Diagnostic: Tree Diagrams 1	
	MH00.41	Topic Diagnostic: Tree Diagrams 2	E
	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	E
Topic Diagnostics: Statistics	MF00.68	Topic Diagnostic: Collecting Data	
	MF00.69	Topic Diagnostic: Displaying Data	
	MI00.06	Topic Diagnostic: Averages and the Range	C
	MF00.70	Topic Diagnostic: Averages and the Range	E
	MI00.05	Topic Diagnostic: Averages and the Range from a Frequency Table	C
	MF00.71	Topic Diagnostic: Averages and the Range from a Frequency Table	E
	MH00.43	Topic Diagnostic: Cumulative Frequency	E
	MH00.44	Topic Diagnostic: Box Plots	E
	MH00.45	Topic Diagnostic: Histograms	E
Simple Arithmetic	MF1.01	Addition	
	MF1.02	Subtraction	
	MF1.03	Addition and Subtraction	
	MF1.04	Times Tables: 2, 5 and 10	

Simple Arithmetic	MF1.05	Times Tables: 3 and 4
	MF1.06	Times Tables: 6 and 7
	MF1.07	Times Tables: 8 and 9
	MF1.08	Times Tables: 11 and 12
	MF1.09	Commutative Law
	MF1.10	Associative Law
	MF1.11	Division: 1, 2, 3, 4, 5 and 10
	MF1.12	Division: 6, 7, 8, 9, 11 and 12
	MF1.13	Division: Mixed
	MF1.14	Distributive Law
Understanding Number	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
	MF2.05	Adding Negatives
	MF2.06	Subtracting Negatives
	MF2.07	Negatives and Positives
	MF2.08	Ordering Integers
	MF2.09	Ordering Decimals
	MF2.10	Ordering Negatives
	MF2.11	Multiplying by Powers of Ten
	MF2.12	Dividing by Powers of Ten
	MF2.13	Rounding to the nearest 10, 100 and 1000

Four Operations	MF3.01	Column Addition
	MF3.02	Column Subtraction
	MF3.03	Addition and Subtraction: Worded Questions
Four Operations	MF3.04	Multiplying Negatives
	MF3.05	Dividing Negatives
	MF3.06	Multiplying and Dividing with Negatives
	MF3.07	Column Multiplication
	MF3.08	Grid Multiplication
	MF3.09	Multiplication with Napier's Bones
	MF3.10	Testing for Divisibility
	MF3.11	Short Division
	MF3.19	Long Division
	MF3.12	Dividing by Multi-Digit Numbers
	MF3.13	Multiplication and Division: Worded Questions
	MF3.14	BIDMAS Introduction
	MF3.15	BIDMAS Intermediate
	MF3.16	BIDMAS Advanced
	MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
	MF3.18	Using a Calculator 2: Multiple Numbers
Working with Fractions	MF4.01	Expressing Fractions
	MF4.02	Ordering Fractions
	MF4.03	Equivalent Fractions
	MF4.04	Simplifying Fractions
	MF4.05	Shading Fractions

Working with Fractions	MF4.06	Mixed and Improper Fractions
	MF4.07	Adding Fractions 1: Same Denominator
	MF4.08	Adding Fractions 2: Convert 1 Denominator
	MF4.09	Adding Fractions 3: Convert 1 Denominator (Sum >1)
	MF4.10	Adding Fractions 4: Convert all Denominators
	MF4.36	Fractions: Subtracting from 1
	MF4.11	Subtracting Fractions
	MF4.12	Adding and Subtracting Fractions
	MF4.13	Adding Improper Fractions
	MF4.14	Adding Mixed Numbers
	MF4.15	Adding Improper Fractions and Mixed Numbers
	MF4.16	Subtracting Improper Fractions
	MF4.17	Subtracting Mixed Numbers
	MF4.18	Subtracting Improper Fractions and Mixed Numbers
	MF4.19	Adding and Subtracting Improper Fractions
	MF4.20	Adding and Subtracting Mixed Numbers
	MF4.21	Adding and Subtracting Improper Fractions and Mixed Numbers
	MF4.37	Fractions on a Number Line 1: Between 0 and 1
	MF4.38	Fractions on a Number Line 2: Beyond 1
	MF4.22	Reciprocals
	MF4.23	Multiplying Fractions 1
	MF4.24	Multiplying Fractions 2
	MF4.25	Dividing Fractions

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MF4.26	Multiplying and Dividing Mixed Numbers	
MF4.27	Multiplying with Whole Numbers and Fractions	
MF4.28	Dividing with Whole Numbers and Fractions	
MF4.39	Fraction of Amounts: Modelling	
MF4.29	Fraction of Amounts: Non-Calculator	
MF4.30	Fraction of Amounts: Calculator	
MF4.31	Increasing and Decreasing by Fractions	
MF4.40	Fraction of Amounts: Modelling Finding the Whole	
MF4.32	Reverse Fractions	
MF4.33	Reverse Fractions: Worded Questions	
MF4.34	Estimating Products of Fractions	
MF4.35	Dividing Fractions (Bar Model)	
MH4.34	Applied Fractions	Ⓔ

Working with Fractions

MF5.01	Odds and Evens with Addition and Subtraction	
MF5.02	Odds and Evens with Multiplication	
MF5.03	Primes	
MF5.04	Multiples	
MF5.05	Factors	
MF5.06	Multiples and Factors	
MF5.07	Lowest Common Multiple - Listing Technique	
MF5.08	Highest Common Factor - Listing Technique	
MF5.09	Prime Factorisation 1: Factor Tree Given	

Factors, Multiples and Primes

MF5.10	Prime Factorisation 2	
MF5.11	Uses of Prime Factorisation	
MF5.12	HCF Using Prime Factorisation: Venn Diagrams	
MF5.13	HCF Using Prime Factorisation: Product of Prime Factors	
MF5.14	LCM Using Prime Factorisation: Venn Diagrams	
MF5.15	LCM Using Prime Factorisation: Product of Prime Factors	
MF5.16	HCF and LCM with Prime Factorisation	
MH5.17	HCF and LCM of 3 Numbers	Ⓔ
MH5.18	Solving Problems with HCF and LCM 1	Ⓔ
MH5.19	Solving Problems with HCF and LCM 2	Ⓔ
MH5.20	Solving Problems with HCF and LCM 3: Reverse	Ⓔ

Factors, Multiples and Primes

MF6.01	Decimal Place Value	
MF6.02	Adding Decimals 1: Calculations	
MF6.03	Adding Decimals 2: Worded Problems	
MF6.04	Subtracting Decimals 1: Calculations	
MF6.05	Subtracting Decimals 2: Worded Problems	
MF6.06	Multiplying Decimals 1	
MF6.07	Multiplying Decimals 2	
MF6.08	Multiplying Decimals: Worded Questions	
MF6.09	Dividing Decimals	
MF6.10	Dividing Decimals by Decimals	
MF6.11	Dividing by Large Numbers	

Working with Decimals

Working with Decimals	MF6.12	Manipulating Decimal Calculations with Multiplication	
	MF6.13	Manipulating Decimal Calculations with Division	
	MF6.14	Multiplying Decimals with Napier's Bones	
Introduction to Percentages (NC)	MF7.01	Understanding Percentages	
	MF7.02	Finding 50%	
	MF7.03	Finding 25%	
	MF7.04	Finding 10%	
	MF7.05	Finding 5%	
	MF7.06	Finding 1%	
	MF7.07	Finding Multiples of Tens in Percentages	
	MF7.15	Percentages of Amounts: Modelling	
	MF7.08	Finding Percentages of Amounts 1	
	MF7.09	Finding Percentages of Amounts 2	
	MF7.10	Finding Percentages of Amounts 3	
	MF7.11	Comparing Percentages 1: Multiples of 5%	
	MF7.12	Comparing Percentages 2	
	MF7.13	Finding Decimal Percentages	
	MF7.14	Estimate with Percentages	
Fractions, Decimals and Percentages	MF8.01	Introduction to Fractions, Decimals and Percentages	
	MF8.02	Converting Fractions to Denominator 100	
	MF8.03	Fractions to Percentage	
	MF8.04	Decimals to Percentage	

Fractions, Decimals and Percentages	MF8.05	Percentage to Decimals	
	MF8.06	Fractions to Decimals 1: Equivalent Fractions	
	MF8.07	Fractions to Decimals 2: Division	
	MF8.08	Percentage to Fractions	
	MF8.09	Decimals to Fractions	
	MF8.10	Fractions to Decimals (Calculator)	
	MF8.11	Fractions to Percentages (Calculator)	
	MF8.12	Percentage to Fractions (Calculator)	
	MF8.13	Decimals to Fractions (Calculator)	
	MF8.14	Ordering Fractions, Decimals and Percentages 1: Unit Fractions (Non-Calculator)	
	MF8.15	Ordering Fractions, Decimals and Percentages 2: Non-Unit Fractions (Non-Calculator)	
	MF8.16	Ordering Fractions, Decimals and Percentages 3: Numbers Less than 1 (Calculator)	
	MF8.17	Ordering Fractions, Decimals and Percentages 4: Numbers More than 1 (Calculator)	
	MF8.18	Converting Percentage (Less than 1%)	
	MF8.19	Converting Percentage (Greater than 100%)	
Recurring Decimals	MH51.01	Fractions to Recurring Decimals 1: Special Cases	Ⓔ
	MH51.02	Fractions to Recurring Decimals 2: Long Division	Ⓔ
	MH51.03	Fractions to Recurring Decimals 3: Long Division (Numbers > 1)	Ⓔ
	MH51.04	Recurring Decimals 1: 1–2 Digits	Ⓔ
	MH51.05	Recurring Decimals 2: 2–4 Digits	Ⓔ

Recurring Decimals	MH51.06	Recurring Decimals 3: Non-Recurring and Recurring Digits	Ⓔ
	MH51.07	Recurring Decimals 4: Special Cases	Ⓔ
	MH51.08	Recurring Decimals 5: Calculations	Ⓔ
Rounding	MF9.01	Rounding to the Nearest Whole Number	
	MF9.02	Rounding to 1 Decimal Place	
	MF9.03	Rounding to 2 Decimal Places	
	MF9.04	Rounding to Mixed Decimal Places	
	MF9.05	Rounding to 1 Significant Figure	
	MF9.06	Rounding to 2 Significant Figures	
	MF9.07	Rounding to 3 Significant Figures	
	MF9.08	Rounding to Mixed Significant Figures	
	MF9.09	Mixed Rounding	
	MF9.10	Rounding to Appropriate Degrees of Accuracy	
	MF9.11	Introduction to Estimation	
	MF9.12	Estimation	
	MF9.13	Bounds 1: Introduction	
	MF9.14	Bounds 2: Simple Calculation	
	MF9.15	Bounds 3: Intervals	
	MH9.16	Bounds 4: Addition	Ⓔ
	MH9.17	Bounds 5: Subtraction	Ⓔ
	MH9.18	Bounds 6: Multiplication	Ⓔ
	MH9.19	Bounds 7: Division	Ⓔ

Rounding	MH9.20	Bounds 8: Mixed Operations	Ⓔ
	MH9.21	Bounds 9: Formulae	Ⓔ
	MH9.22	Bounds 10: Suitable Degrees of Accuracy	Ⓔ
	MH9.23	Bounds 11: Discrete Variables	Ⓔ
	MH9.24	Truncation	Ⓔ
Percentages Non-Calculator	MF10.06	Percentage Increase and Decrease: Modelling	
	MF10.01	Percentage Increase	
	MF10.02	Percentage Decrease	
	MF10.03	Percentage Increase and Decrease	
	MF10.04	Finding Percentages greater than 100	
	MF10.05	Simple Interest	
Percentages Calculator	MF11.01	Finding Percentages 1: Integer Percentages < 100% (Calculator)	
	MF11.02	Finding Percentages 2: > 100% or Non-Integer Percentages (Calculator)	
	MF11.03	Percentage Increase and Decrease (Calculator)	
	MF11.04	Percentage Change	
	MF11.05	Repeated Percentage Increase and Decrease (Calculator)	
	MF11.06	Simple Interest (Calculator)	
	MF11.07	Compound Interest (Calculator)	
	MF11.08	Depreciation (Calculator)	
	MF11.09	Compound Interest and Depreciation (Calculator)	
	MF11.10	Simple and Compound Interest (Calculator)	

Percentages Calculator	MF11.18	Reverse Percentages Introduction: Modelling	
	MF11.19	Reverse Percentages: Modelling	
	MF11.11	Reverse Percentage	
	MF11.12	Percentage Error	
	MF11.13	Express One Amount as a Percentage of Another	
	MF11.14	Percentage Problems	
	MH11.14	Exponential Growth	
	MH11.15	Exponential Decay	(E)
	MH11.16	Exponential Growth and Decay	(E)
	MI11.17	Earnings, Profit and Loss	
Powers and Roots	MF12.01	Squares	
	MF12.02	Cubes	
	MF12.03	Squaring and Cubing Negatives	
	MF12.04	Powers	
	MF12.05	Roots of Squares and Cubes	
	MF12.06	Roots	
	MH12.07	Estimating Powers and Roots	(E)
Surds	MH52.01	Surds: Introduction	(E)
	MH52.02	Surds: Multiplication and Division	(E)
	MH52.03	Surds: Simplifying 1	(E)
	MH52.04	Surds: Simplifying 2 (Products of Surds)	(E)
	MH52.05	Surds: Simplifying 3 (Dividing Surds)	(E)

Surds	MH52.06	Surds: Simplifying 4 (Sum and Difference)	(E)
	MH52.07	Surds: Expanding 1 (Single Bracket)	(E)
	MH52.08	Surds: Expanding 2 (Sum/Difference of Single Brackets)	(E)
	MH52.09	Surds: Expanding 3 (Double Brackets)	(E)
	MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	(E)
	MH52.11	Surds: Expanding 5 (Difference of Two Squares)	(E)
	MH52.12	Surds: Rationalising 1 (Monomial Denominator)	(E)
	MH52.13	Surds: Rationalising 2 (Binomial Denominator)	(E)
	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)	(E)
	MH52.15	Surds: Rationalising 4 Sum/Difference with Binomial Denominators)	(E)
	MH52.16	Surds: Rationalising 5(Surd within Fraction within Denominator)	(E)
Indices	MF13.01	Powers of 0 and 1	
	MF13.02	Raising a Fraction to a Power	
	MF13.03	Multiplying Indices	
	MF13.04	Dividing Indices	
	MF13.05	Power of a Power	
	MF13.06	Negative Indices	
	MF13.07	Combination of Indices	
	MH13.08	Fractional Indices 1: Square and Cube Root	(E)
	MH13.09	Fractional Indices 2: Non-Unit Fraction	(E)

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Indices	MH13.10	Fractional Indices 3: Negative Unit Fractions	(E)
	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions	(E)
	MH13.12	Fractional Indices 5: Fraction Base	(E)
	MH13.13	Fractional Indices: Calculator	(E)
	MH13.14	Solving Problems with Indices 1: Combination of Rules	(E)
	MH13.15	Solving Problems with Indices 2: Combination of Rules	(E)
	MH13.16	Solving Problems with Indices 3: Working Backwards	(E)
	MH13.17	Solving Problems with Indices 4: Solving Equations	(E)
	MH13.18	Solving Problems with Indices 5: Including Square/Cube Root Form	(E)
	MH13.19	Solving Problems with Indices 6: Challenge	(E)
	MH13.20	Solving Problems with Indices 7: Challenge	(E)
	MH13.21	Exponential Equations 1: Introduction	(E)
	MH13.22	Exponential Equations 2: Quadratics (Changing One Base)	(E)
	MH13.23	Exponential Equations 3: Quadratics (Changing Multiple Bases)	(E)
	MH13.24	Exponential Equations 4: Challenge	(E)
Standard Form	MF14.01	The Positive Powers of 10	
	MF14.02	The Negative Powers of 10	
	MF14.03	Standard Form to Ordinary	
	MF14.04	Ordinary to Standard Form	
	MF14.05	Fixing into Standard Form	
	MF14.06	Ordering Standard Form	

Standard Form	MF14.07	Adding and Subtracting with Standard Form
	MF14.08	Multiplying with Standard Form
	MF14.09	Dividing with Standard Form
	MF14.10	Standard Form: Worded problems with calculator
Ratio	MF15.01	Introduction to Ratio
	MF15.02	Simplifying Ratios
	MF15.03	Converting Ratios into the Form 1:n
	MF15.04	Converting Ratios into the Form n:1
	MF15.05	3 Part Ratios
	MF15.06	Simplifying Ratios with Units
	MF15.15	Sharing with a Given Ratio: Modelling
	MF15.16	Ratio Fluency: Modelling
	MF15.07	Sharing with a Given Ratio 1
	MF15.08	Sharing with a Given Ratio 2 (Calculator)
	MF15.09	Sharing with a Given Ratio 3 (Calculator): Working Backwards
	MF15.10	Sharing with a Given Ratio 4 (Calculator): 3 Part Ratios
	MF15.11	Converting Ratios into Fractions
	MF15.12	Converting Fractions into Ratios
	MF15.13	Part of a Ratio to the Whole
	MF15.14	Ratio and Algebra
	MF15.17	Ratio: Problem Solving
	MF15.18	Ratio: Two Ratios

Category	Code	Topic	
Ratio	MF15.19	Ratio: Angles	
	MF15.20	Ratio: Applied	
	MH15.21	Ratio: Applied (Advanced)	Ⓔ
	MH15.22	Ratio: Changing Ratios	Ⓔ
Ratio and Proportion	MF16.01	Introduction to Proportion	
	MF16.02	Recipe Ratio 1: Find Amount of Ingredients	
	MF16.03	Recipe Ratio 2: Find the Number of People	
	MF16.04	Better Value	
	MF16.05	Direct Proportion 1: Conversions	
	MF16.06	Direct Proportion 2: y = kx	Ⓔ
	MF16.07	Inverse Proportion 1: Introduction	
	MF16.08	Inverse Proportion 2: y = k/x	Ⓔ
	MF16.09	Proportions on a Graph	
	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence	
	MH16.10	Direct Proportion 3: $y = kx^a$ and $y = k\sqrt{x}$	Ⓔ
	MH16.11	Inverse Proportion 3: $y = k/x^a$ and $y = k/\sqrt{x}$	Ⓔ
	MH16.12	Interpreting Direct and Inverse Proportion 1: y = kx and $y = k/x^a$	Ⓔ
	MH16.13	Interpreting Direct and Inverse Proportion 2: Problem Solving	Ⓔ
	MH16.14	Proportions on a Graph 2: Linear, Quadratic, Cubic and Root	Ⓔ
	MH16.15	Two Step Direct and Inverse Proportion	Ⓔ

Category	Code	Topic	
Introduction to Algebra	MF17.01	Forming Algebraic Expressions: One Step	
	MF17.02	Forming Algebraic Expressions: Two Step	
	MF17.03	Algebraic Terminology	
	MF17.04	Collecting Like Terms 1: Add and Subtract	
	MF17.05	Collecting Like Terms 2: Add and Subtract (Including Squared/Cubed Variables)	
	MF17.06	Collecting Like Terms 3: In Context (Perimeter)	
	MF17.07	Simplifying Expressions 1: Multiplication	
	MF17.08	Simplifying Expressions 2: Multiplication (In Context)	
	MF17.09	Simplifying Expressions 3: Division	
	MF17.10	Simplifying Expressions 4: Division	
	MF17.11	Simplifying Expressions 5: Multiplication and Division	
	MH17.17	Simplifying Expressions 6: Index Laws	Ⓔ
	MH17.18	Simplifying Expressions 7: Index Laws	Ⓔ
	MF17.12	Function Machines	
	MF17.13	Substitution into Expressions 1: One Term	
	MF17.14	Substitution into Expressions 2: Two Terms	
	MF17.15	Substitution into Expressions 3: Two Terms incl. Squares	
	MF17.16	Substitution into Expressions 4: Calculator	
Expanding and Factorising	MF18.25	Expanding Single Brackets: Introduction	
	MF18.01	Expanding Single Brackets 1: a(x ± b)	
	MF18.02	Expanding Single Brackets 2: ±a(x ± b)	
	MF18.03	Expanding Single Brackets 3: ±a(±bx ± cy)	

MF18.04	Expanding Single Brackets 4: ± x(± y ± a)	
MF18.05	Expanding Single Brackets 5: Mixed	
MF18.06	Expanding and Simplifying	
MF18.07	Factorising into a Single Bracket 1: x ± a or a ± x	
MF18.08	Factorising into a Single Bracket 2: ax ± bx	
MF18.09	Factorising into a Single Bracket 3: $axy(bx^2 ± cx ± d)$	
MF18.10	Expanding Double Brackets 1: (x ± a)(x ± b)	
MF18.11	Expanding Double Brackets 2: (ax ± b)(cx ± d)	
MF18.12	Expanding Double Brackets 3: $(x ± a)^2$	
MF18.13	Expanding Double Brackets 4: a(bx ± c)(dx ± e)	
MF18.14	Expanding Double Brackets 5: $a(bx ± c)^2$	
MH18.18	Expanding Double Brackets 6: (ax ± b)(cy ± d)	Ⓔ
MH18.19	Expanding More Brackets	Ⓔ
MF18.15	Factorising Quadratics 1: (x + a)(x + b)	
MF18.16	Factorising Quadratics 2: (x ± a)(x ± b)	
MH18.20	Factorising Quadratics 3: (ax ± b)(x ± c)	
MH18.21	Factorising Quadratics 4: (ax ± b)(x ± c)	
MH18.22	Factorising Quadratics 5: (ax ± b)(x ± c)	
MH18.23	Factorising Quadratics 6: (ax ± b)(cx ± d)	
MH18.24	Factorising Quadratics 7: (ax ± b)(cx ± d)	
MF18.17	The Difference of Two Squares	

MF19.30	Solving Equations: One Step Modelling (+ −)
MF19.01	Solving Equations: One Step (+ −)
MF19.31	Solving Equations: One Step Modelling (× ÷)
MF19.02	Solving Equations: One Step (×)
MF19.03	Solving Equations: One Step (÷)
MF19.04	Solving Equations: One Step (+ − × ÷)
MF19.32	Solving Equations: Two Steps Modelling (×)
MF19.33	Solving Equations: Two Steps Modelling (÷)
MF19.05	Solving Equations: Two Steps Modelling (+ − × ÷)
MF19.06	Solving Equations: Two Steps ax + b = c
MF19.07	Solving Equations: Two Steps ax − b = c
MF19.08	Solving Equations: Two Steps (x/a) ± b = c
MF19.09	Solving Equations: Two Steps (x ± a)/b = c
MF19.10	Solving Equations: Two Steps (Unknown as Denominator)
MF19.11	Solving Equations: Two Steps (Negative Unknown)
MF19.12	Solving Equations: Two Steps (Mixed Exercise)
MF19.13	Solving Equations: Three Steps (Unknown on One Side)
MF19.14	Solving Equations: Three Steps (Including Brackets)
MF19.15	Solving Equations: Three Steps (Unknown on Both Sides)
MF19.16	Solving Equations: Four Steps (Including Expanding)
MF19.17	Solving Equations: Four Steps (Including Fractions)

Solving Linear Equations	MF19.18	Generating Equations from Words	
	MF19.19	Generating Equations from Diagrams	
	MF19.20	Simultaneous Equations: Introduction	
	MF19.21	Simultaneous Equations 1	
	MF19.22	Simultaneous Equations 2: Scale One Equation	
	MF19.23	Simultaneous Equations 3: Scale Both Equations	
	MF19.24	Simultaneous Equations 4: Rearranging	
	MF19.25	Simultaneous Equations: Substitution	
	MH19.27	Iteration 1: Find Solution Between	(E)
	MH19.28	Iteration 2: Rearrange Iterative Formula	(E)
	MH19.29	Iteration 3: Recursive Iteration	(E)
	MF19.26	Simultaneous Equations: Worded Questions	
Solving Quadratic Equations	MF20.01	Solving Quadratics 1: $x^2 + b = 0$	
	MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$	
	MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$	
	MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)	
	MH20.05	The Discriminant	(E)
	MH20.06	Quadratic Formula 1: Identify A, B and C	(E)
	MH20.07	Quadratic Formula 2: Applying the Formula	(E)
	MH20.08	Quadratic Formula 3: Applying the Formula	(E)
	MH20.09	Quadratic Formula 4: Give Answer in Form $(p \pm \sqrt{q})/r$	(E)
	MH20.10	Quadratic Formula 5: In Context	(E)

Solving Quadratic Equations	MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)	(E)
	MH20.12	Solving Quadratics 6: $ax^2 + bx + c = 0$ (a is Not Prime)	(E)
	MH20.13	Solving Quadratics 7: Challenge	
	MH20.14	Quadratic Simultaneous Equations	
Completing the Square	MH53.01	Completing the Square 1: $(x + q)^2 + r$	
	MH53.02	Completing the Square 2: $(x + q/2)^2 + r$	
	MH53.03	Completing the Square 3: $p(x + q)^2 + r$	
	MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$	
	MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$	
	MH53.06	Completing the Square to Solve Equations 2: $x^2 + bx + c$ (Including Fractions)	
	MH53.07	Completing the Square to Solve Equations 3: $ax^2 + bx + c$	
	MH53.08	Completing the Square to Solve Equations 4: Mixed Exercise	
	MH53.09	Completing the Square: Turning Points	
Algebraic Fractions	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)	
	MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)	(E)
	MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)	(E)
	MH54.04	Algebraic Fractions 4: Simplify (Binomial Factors)	(E)
	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)	(E)
	MH54.06	Algebraic Fractions 6: Add and Subtract (Monomial as Denominator)	(E)
	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)	(E)

Algebraic Fractions	MH54.08	Algebraic Fractions 8: Multiply	(E)
	MH54.09	Algebraic Fractions 9: Multiply	(E)
	MH54.10	Algebraic Fractions 10: Factorise then Multiply	(E)
	MH54.11	Algebraic Fractions 11: Divide	(E)
	MH54.12	Algebraic Fractions 12: Solve	(E)
	MH54.13	Algebraic Fractions 13: Problem Solving	(E)
Formulae	MF21.01	Generating Formulae	
	MF21.02	Substituting into a Formula	
	MF21.03	Using Kinematics	
	MF21.04	Recalling and Using Formulae 1	
	MH21.11	Recalling and Using Formulae 2	(E)
	MF21.05	Rearranging Formulae: One Step	
	MF21.06	Rearranging Formulae: Two Step	
	MF21.07	Rearranging Formulae: Negative Subject	
	MF21.08	Rearranging Formulae: Unknown in Denominator	
	MF21.09	Rearranging Formulae: With Powers	
	MF21.10	Rearranging Formulae: Unknown on Both Sides	
Algebraic Proof	MH55.01	Introduction to Algebraic Proof	(E)
	MH55.02	Algebraic Proof 1: Complete the Proof	(E)
	MH55.03	Algebraic Proof 2	(E)
	MH55.04	Algebraic Proof: Disproving by Example	(E)

Functions	MH56.01	Functions: Key Concept	(E)
	MI56.18	Functions: Domain	(E)
	MI56.19	Functions: Range	(E)
	MH56.02	Functions: Substitution 1 (Linear Functions)	(E)
	MH56.03	Functions: Substitution 2 (Quadratic Functions)	(E)
	MH56.04	Functions: Substitution 3 (Challenge)	(E)
	MH56.05	Functions: Solving	(E)
	MH56.06	Functions: Algebraic	(E)
	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)	(E)
	MH56.08	Composite Functions: Substitution 2 (2 Non-Linear Functions)	(E)
	MH56.09	Composite Functions: Substitution 3 (3 Functions)	(E)
	MH56.10	Composite Functions: Substitution 4 (Quadratic Functions)	(E)
	MH56.11	Composite Functions: Solving	(E)
	MH56.12	Composite Functions: Algebraic	(E)
	MH56.13	Inverse Functions 1: Linear	(E)
	MH56.14	Inverse Functions 2: Non-Linear	(E)
	MH56.15	Inverse Functions: Substitution	(E)
	MH56.16	Inverse Functions: Solving	(E)
	MH56.17	Composite and Inverse Functions	(E)
Sequences	MF22.01	Continuing Sequences	
	MF22.02	Linear Sequences: Finding the Term-to-Term Rule	
	MF22.03	Linear Sequences: Using the Term-to-Term Rule	

MF22.04	Linear Sequences with Diagrams 1: Term-to-Term Rule	
MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)	
MF22.06	Linear Sequences: Using the nth Term 2 (Solve)	
MI22.20	Sequences: $a + (n - 1)d$	(E)
MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)	
MF22.08	Linear Sequences: Finding the nth Term 2 (Decreasing)	
MI22.21	Sum of Arithmetic Sequences 1	(E)
MI22.22	Sum of Arithmetic Sequences 2: Reverse	(E)
MF22.09	Linear Sequences with Diagrams 2: nth Term	
MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers	
MF22.11	Important Sequences: Geometric	
MF22.12	Important Sequences: Fibonacci	
MF22.13	Quadratic Sequences: Using the nth Term	
MH22.14	Subscript Notation	(E)
MH22.15	Unusual Sequences	(E)
MH22.16	Quadratic Sequences 1: $n^2 + c$	(E)
MH22.17	Quadratic Sequences 2: $an^2 + c$	(E)
MH22.18	Quadratic Sequences 3: $an^2 + bn + c$	(E)
MH22.19	Quadratic Sequences 4: $an^2 + bn + c$ and $(an + b)^2$	(E)
MF23.01	Understanding Coordinates: 1st Quadrant	
MF23.02	Understanding Coordinates: 4 Quadrants	
MF23.26	Coordinates and 2D Shapes	

Sequences

Straight Line Graphs

MF23.03	Midpoint of a Line Segment	(E)
MH23.20	Coordinates and Ratios	(E)
MF23.04	Horizontal and Vertical Graphs	
MF23.05	Other Important Linear Graphs	
MF23.06	Plotting Straight Line Graphs: 1st Quadrant	
MF23.07	Plotting Straight Line Graphs: 4 Quadrants	
MF23.08	Finding the Gradient of a Line Segment: Using the Graph	
MF23.09	Finding the Gradient of a Line Segment: Using the Formula	
MF23.10	Understanding $y = mx + c$	
MF23.11	Graphing $y = mx + c$ (1)	
MF23.12	Graphing $y = mx + c$ (2)	
MF23.13	Finding $y = mx + c$ from a Gradient and a Point	
MF23.14	Finding $y = mx + c$ from Two Points	
MF23.15	Rearranging $y = mx + c$	
MF23.16	Finding Parallel Lines	
MH23.21	Finding Perpendicular Lines 1: Gradient	(E)
MH23.22	Finding Perpendicular Lines 2: Equation	(E)
MH23.23	Finding Perpendicular Lines 3: Problem Solving	(E)
MH23.24	Equation of a Tangent 1: Circle Given	(E)
MH23.25	Equation of a Tangent 2: Mixed Exercise	(E)
MF23.17	Solving Using Straight Line Graphs	

Straight Line Graphs

Straight Line Graphs	MF23.18	Solving Simultaneous Equations Using Straight Line Graphs 1: Graphs Given	
	MF23.19	Solving Simultaneous Equations Using Straight Line Graphs 2: Graphs Not Given	
Quadratic and Other Graphs	MF24.01	Plotting Simple Quadratic Graphs 1: $y = ax^2 + c$	
	MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$	
	MF24.03	Quadratic Graphs: Finding the y-intercept	
	MF24.04	Quadratic Graphs: Finding the Line of Symmetry	
	MF24.05	Quadratic Graphs: Finding the Turning Point	
	MF24.06	Quadratic Graphs: Finding the Roots	
	MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given	(E)
	MH24.14	Quadratic Graphs: Turning Point from Completing Square 2: $y = (x + q)^2 + r$ Not Given	(E)
	MH24.15	Quadratic Graphs: Turning Point from Completing Square 3: $y = \pm p(x + q)^2 + r$ Not Given	(E)
	MH24.16	Estimating Gradients	(E)
	MH24.17	Exponential Functions	(E)
	MH24.18	Trigonometric Functions: Sin Graph	(E)
	MH24.19	Trigonometric Functions: Cos Graph	(E)
	MH24.20	Trigonometric Functions: Tan Graph	(E)
	MH24.37	Trigonometric Functions: Mixed	(E)
	MH24.22	Equations of Circles	(E)
	MF24.07	Plotting Other Polynomial Graphs	
	MF24.08	Plotting Reciprocal Graphs	
	MH24.23	Plotting Exponential Graphs	(E)

Quadratic and Other Graphs	MF24.09	Recognising Key Graphs	
	MF24.10	Approximate Solutions Using a Graph	
	MH24.24	Transforming Graphs: Translating Vertical	(E)
	MH24.25	Transforming Graphs: Translating Horizontal	(E)
	MH24.26	Transforming Graphs: Reflections	(E)
	MH24.27	Transforming Graphs: Stretching y-direction	(E)
	MH24.28	Transforming Graphs: Stretching x-direction	(E)
	MH24.29	Transforming Graphs: Mixed Translations	(E)
	MH24.30	Transforming Graphs: Mixed Stretches	(E)
	MH24.31	Transforming Graphs: Mixed	(E)
	MH24.21	Transforming Graphs: Mixed (Trig Functions)	(E)
	MH24.32	Transforming Graphs: Combined 1	(E)
	MH24.33	Transforming Graphs: Combined 2	(E)
	MH24.34	Areas under Graphs	(E)
	MF24.11	Real Life Graphs: Plotting	
	MF24.12	Real Life Graphs: Interpreting	
	MH24.35	Quadratic Simultaneous Equations Graphically	(E)
	MH24.36	Polynomial Simultaneous Equations Graphically	(E)
Inequalities	MF25.01	Representing Inequalities on a Number Line	
	MF25.02	Representing Two Sided Inequalities on a Number Line	
	MF25.03	Interpreting Inequalities from a Number Line	
	MF25.04	Interpreting Two Sided Inequalities from a Number Line	
	MH25.13	Solving Quadratic Inequalities Graphically	(E)

	MF25.05	Finding Integer Solutions to Inequalities	
	MF25.06	Solving Inequalities: One Step	
	MF25.07	Solving Inequalities: Negative Variable	
	MF25.08	Solving Inequalities: Two Step	
	MF25.09	Solving Inequalities: One Step and Two Sided	
	MF25.10	Solving Inequalities: Multi Step and Two Sided	
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides	
Inequalities	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line	
	MH25.14	Solving Inequalities: Quadratics 1	(E)
	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)	(E)
	MH25.16	Solving Inequalities: Quadratics 3 (Factorising)	(E)
	MH25.17	Solving Multiple Linear Inequalities	(E)
	MH25.18	Regions 1: One Vertical/Horizontal Line	(E)
	MH25.19	Regions 2: One Line of Form y = mx + c	(E)
	MH25.20	Regions 3: Multiple Vertical/Horizontal Lines	(E)
	MH25.21	Regions 4: Multiple Lines of Form y = mx + c	(E)
	MI25.22	Linear Programming 1: Constructing Inequalities	(E)
	MI25.23	Linear Programming 2: Shading and Interpreting	(E)
Calculus	MI62.01	Differentiating Functions 1: Single Term	(E)
	MI62.02	Differentiating Functions 2: Multiple Terms	(E)
	MI62.03	Differentiating Functions 3: Negative Powers	(E)

	MI62.04	Differentiating Functions 4: Involving Expanding	(E)
	MI62.05	Differentiating Functions: Gradient at a Point 1	(E)
	MI62.06	Differentiating Functions: Gradient at a Point 2	(E)
Calculus	MI62.07	Differentiating Functions: Turning Points 1	(E)
	MI62.08	Differentiating Functions: Turning Points 2	(E)
	MI62.09	Differentiating Functions: Problem Solving	(E)
	MI62.10	Differentiating Functions: Kinematics	(E)
	MI62.11	Differentiating Functions: Second Derivative	(E)
	MF26.01	Key Terms in 2D Geometry	
	MF26.02	Key Terms in 3D Geometry	
	MF26.03	Types of Angles 1: Diagrams	
	MF26.04	Types of Angles 2: Numbers	
Introduction to Geometry	MF26.05	Parallel and Perpendicular Lines	
	MF26.06	Naming 2D Shapes	
	MF26.07	Types of Triangles 1: Diagrams	
	MF26.08	Types of Triangles 2: Words	
	MF26.09	Types of Quadrilateral	
	MF26.10	Naming 3D Shapes	
	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)	
	MF26.12	Measuring Angles 2: Angles < 180°	
	MF26.13	Measuring Angles 3: Angles > 180°	

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Introduction to Geometry	MF26.14	Estimating Angles
	MF26.15	Drawing Angles
	MF26.16	Using a Ruler
Angles	MF27.01	Straight Line Angles 1: Multiples of 5°
	MF27.02	Straight Line Angles 2
	MF27.03	Straight Line Angles with Algebra
	MF27.04	Angles Around a Point 1: Multiples of 5°
	MF27.05	Angles Around a Point 2
	MF27.06	Angles Around a Point with Algebra
	MF27.07	Vertically Opposite Angles
	MF27.08	Alternate Angles
	MF27.09	Corresponding Angles
	MF27.10	Co-interior Angles
	MF27.11	Angles in Parallel Lines 1
	MF27.12	Angles in Parallel Lines 2
	MH57.01	Angle in a Semicircle and Angle at Tangent Ⓒ
Angles in Polygons	MF28.01	Angles in a Triangle 1
	MF28.02	Angles in a Triangle 2: Isosceles Triangles
	MF28.03	Angles in a Triangle 3: Including Angles on a Straight Line
	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
	MF28.05	Angles in Quadrilaterals
	MF28.06	Introduction to Angles in Polygons
	MF28.07	Interior Angles 1: Sum of Interior Angles

Angles in Polygons	MF28.08	Interior Angles 2: Angles in Regular Shapes
	MF28.09	Interior Angles in Irregular Shapes
	MF28.10	Exterior Angles
	MF28.11	Using Multiple Rules with Angles in Polygons
2D Shapes	MF29.01	Rotational Symmetry
	MF29.02	Reflective Symmetry
	MF29.03	Quadrilateral Facts
	MF29.04	Polygon Facts
	MF29.05	Naming the Parts of a Circle
	MF29.06	Congruence
	MF29.07	Congruent Triangles
Perimeter	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
Area	MF31.01	Area by Counting Squares
	MF31.02	Estimating Area
	MF31.03	Area of Squares, Rectangles and Parallelograms
	MF31.04	Area of Right Angled Triangles
	MF31.05	Area of Triangles
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Area	MF31.07	Area of Trapeziums
	MF31.08	Area of Composite Shapes 2: Subtracting
	MF31.09	Area and Algebra
Circles	MF32.01	Circumference: From Radius
	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter
	MF32.05	Perimeter of Part Circles
	MF32.06	Perimeter of Composite Shapes with Part Circles
	MF32.07	Area of a Circle: From Radius
	MF32.08	Area of a Circle: From Diameter
	MF32.09	Area of a Circle
	MF32.10	Using the Area of a Circle to find the Radius or Diameter
	MF32.11	Areas of Part Circles
	MF32.12	Areas of Composite Shapes with Part Circles
	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MH32.17	Arc Length 3: Reverse Ⓔ
	MF32.15	Area of a Sector 1
	MH32.18	Area of a Sector 2: Reverse Ⓔ
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving Ⓔ

3D Shapes	MF33.01	Planes of Symmetry
	MF33.02	Nets of Cubes
	MF33.03	Plans and Elevations with Cuboids
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Volume	MF34.01	Counting Cubes
	MF34.02	Volume of Cubes and Cuboids
	MF34.03	Volume of Cubes and Cuboids with Missing Side(s)
	MF34.04	Volume of Prisms 1: Given Area
	MF34.05	Volume of Prisms 2: Triangular Prisms
	MF34.06	Volume of Prisms 3: Mixed Exercise
	MF34.07	Volume of Cylinders
	MF34.08	Volume of Cylinders with a Missing Value
	MF34.09	Volume of Part Cylinders
	MF34.10	Volume of a Sphere
	MF34.11	Volume of a Sphere with the Radius Missing
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	MF34.13	Volume of a Cone with the Radius Missing
	MF34.14	Volume of a Hemisphere
	MF34.15	Volume of Pyramids
	MF34.16	Volume of Composite Solids
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	MF35.01	Surface Area of Cuboids
	MF35.02	Surface Area of Prisms
	MF35.03	Surface Area of Cylinders
Surface Area	**MF35.04**	Surface Area of Part Cylinders
	MF35.05	Surface Area of Spheres
	MF35.06	Surface Area of Cones
	MF35.07	Surface Area of Pyramids
	MF35.08	Surface Area of Composite Solids
	MH35.09	Problem Solving with Surface Area Ⓔ
	MF36.01	Reading Scales
	MF36.02	Metric Units
	MF36.03	Estimating with Metric Units
	MF36.04	Converting Metric Length (One Step)
	MF36.05	Converting Metric Length (Multi-Step)
	MF36.06	Converting Metric Length: Worded Questions
Measure	**MF36.07**	Converting Metric Mass (One Step)
	MF36.08	Converting Metric Mass (Multi-Step)
	MF36.09	Converting Metric Mass: Worded Questions
	MF36.10	Converting Metric Capacity
	MF36.11	Converting Metric Volume 1
	MF36.12	Converting Metric Volume 2
	MF36.13	Converting Area 2: Unit Conversions

	MF36.14	Converting Area 1: Area Model
	MF36.15	Converting Volume
	MF36.16	Metric and Imperial Length (No Calculator)
	MF36.17	Metric and Imperial Length (Calculator)
Measure	**MF36.18**	Metric and Imperial Mass and Volume (No Calculator)
	MF36.19	Metric and Imperial Mass and Volume (Calculator)
	MF36.20	Conversion Graphs: Drawing
	MF36.21	Conversion Graphs: Interpreting
	MF36.22	Conversion Graphs: Units of Measure
	MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past
	MF37.02	Reading a 12-Hour Clock 2: Multiples of 5
	MF37.03	Reading a 12-Hour Clock 3: Mixed
	MF37.04	Converting Time: AM and PM
	MF37.05	Converting Time: Seconds, Minutes and Hours
Time and Money	**MF37.06**	Converting Time: Days, Weeks and Years
	MF37.07	Calendar Months
	MF37.08	Converting Time: Mixed Units
	MF37.09	Problems with Time
	MF37.10	Converting Currency 1
	MF37.11	Converting Currency 2: Double Conversions
	MF37.12	Converting Currency: Mixed Problems

Compound Measure

MF38.01	Finding Speed (SDT)	
MF38.02	Finding Speed with Conversions (SDT)	
MF38.03	Finding Distance (SDT)	
MF38.04	Finding Distance with Conversions (SDT)	
MF38.05	Finding Time (SDT)	
MF38.06	Finding Time with Conversions (SDT)	
MF38.07	Speed, Distance and Time: Mixed Questions	
MF38.08	Converting Units with Speed, Distance and Time	
MF38.09	Understanding and Converting Units (DMV)	
MF38.10	Finding Density (DMV)	
MF38.11	Finding Density with Conversions (DMV)	
MF38.12	Finding Mass (DMV)	
MF38.13	Finding Mass with Conversions (DMV)	
MF38.14	Finding Volume (DMV)	
MF38.15	Finding Volume with Conversions (DMV)	
MF38.16	Density, Mass and Volume: Mixed Questions	
MF38.17	Converting Units with Density, Mass and Volume	
MF38.18	Force, Pressure and Area	
MF38.19	Distance-Time Graphs: Drawing	
MF38.20	Distance-Time Graphs: Interpreting	
MF38.21	Distance-Time Graphs: Speed	
MH38.22	Velocity-Time Graph: Interpreting	(E)

Compound Measure

MH38.23	Velocity-Time Graph: Distance	(E)
MH38.24	Velocity-Time Graph: Acceleration	(E)
MH38.25	Velocity-Time Graph: Problem Solving	(E)

Scale Drawings and Bearings

MF39.01	Using Scales with Units	
MF39.02	Finding Scales with Units	
MF39.03	Using Scales without Units	
MF39.04	Finding Scales without Units	
MF39.05	Using Scales on a Map	
MF39.10	Creating Scale Diagrams	
MF39.06	Introduction to Bearings	
MF39.07	Bearings from North	
MF39.08	Finding Bearings 1	
MF39.09	Finding Bearings 2: Using Co-interior Angles	

Transformations

MF40.01	Introduction to Reflection	
MF40.02	Finding the Line of Reflection	
MF40.03	Coordinates in Reflection	
MF40.04	Translating a Point	
MF40.05	Translating a Shape	
MF40.06	Describing Translations	
MF40.07	Enlarging Shapes	
MF40.08	Enlargements with 0<SF<1	
MF40.09	Enlargement with Centre (0,0)	

MF40.10	Enlargement with Centre (x,y)	
MF40.11	Enlargement with Fractional Scale Factor (0,0)	
MF40.12	Enlargement with Fractional Scale Factor (x,y)	
MH40.20	Enlargement with Negative Scale Factor	(E)
MH40.21	Enlargement with Negative Fractional Scale Factor	(E)
MH40.22	Enlargement with Mixed Scale Factor	(E)
MF40.13	Describing Enlargements with an Integer Scale Factor	
MF40.14	Describing Enlargements with a Non-Integer Scale Factor	
MH40.23	Describing Enlargements with Mixed Scale Factor	(E)
MF40.15	Rotation with Centre (0,0)	
MF40.16	Rotation with Centre (x,y)	
MF40.17	Describing Rotation	
MF40.18	Describing Transformations	
MF40.19	Combination of Transformations 1	
MH40.24	Combination of Transformations 2	(E)

Transformations

MH57.01	Angle in a Semicircle and Angle at Tangent	(E)
MH57.02	Properties of Diameter and Radii	(E)
MH57.03	Tangents from an External Point	(E)
MH57.04	Angles at the Centre	(E)
MH57.05	Angles on the Same Arc	(E)
MH57.06	Angles at the Centre and on the Same Arc	(E)
MH57.07	Cyclic Quadrilaterals	(E)

Circle Theorems

MH57.08	Alternate Segment Theorem	(E)
MI57.13	Intersecting Chord Theorem	(E)
MI57.14	Intersecting Secant Theorem	(E)
MH57.09	Mixed Circle Theorems 1: Practice	(E)
MH57.10	Mixed Circle Theorems 2: Algebra	(E)
MH57.11	Mixed Circle Theorems 3: Two Theorems	(E)
MH57.12	Mixed Circle Theorems 4: Challenge	(E)
MI57.15	Mixed Circle Theorems 5: Including Chord and Secant Theorems	(E)
MI57.16	Mixed Circle Theorems 6: Challenge incl. Chord and Secant Theorems	(E)

Circle Theorems

MF41.01	Column Vectors	
MF41.02	Column Vectors: Scalar Multiplication	
MF41.03	Column Vectors: Addition and Subtraction	
MF41.04	Column Vectors: Drawing	
MI41.14	Magnitude of Vectors	(E)
MF41.05	Geometric Vectors 1: One Term	
MF41.06	Geometric Vectors 2: Two Terms	
MH41.07	Geometric Vectors 3: Within Shapes	(E)
MH41.08	Geometric Vectors 4: Expand and Simplify	(E)
MH41.09	Geometric Vectors 5: Midpoints	(E)
MH41.10	Geometric Vectors 6: Ratios	(E)
MH41.11	Geometric Vectors 7: Fractions and Ratios	(E)

Vectors

Vectors	MH41.12	Geometric Vectors 8: Parallel Vectors	(E)
	MH41.13	Geometric Vectors 9: Proof	(E)
Construction and Loci	MF42.01	Constructing Circles	
	MF42.02	Constructing an Equilateral Triangle	
	MI42.10	Constructing Triangles	
	MF42.03	Perpendicular Bisector	
	MF42.04	Angle Bisector	
	MF42.05	Perpendicular from a Point to a Line	
	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)	
	MF42.07	Understanding Loci	
	MF42.08	Loci 1: Single Constructions	
	MF42.09	Loci 2: Multi-Step Problems	
Similarity	MF43.01	Introduction to Similarity	
	MF43.02	Similar Polygons: Finding the Scale Factor	
	MF43.03	Similar Polygons: Missing Sides given Scale Factor	
	MF43.04	Similar Polygons: Missing Sides	
	MF43.05	Similar Triangles 1: Same Orientation	
	MF43.06	Similar Triangles 2: Different Orientations	
	MH43.07	Similar Area 1	(E)
	MH43.08	Similar Area 2: Including Ratio	(E)
	MH43.09	Similar Volume	(E)
	MH43.10	Similar Area and Volume	(E)

Pythagoras	MF44.01	Pythagoras' Theorem	
	MF44.02	Pythagoras: Finding the Hypotenuse	
	MF44.03	Pythagoras: Finding a Short Side	
	MF44.04	Pythagoras: Mixed Sides	
	MF44.05	Pythagoras: Using Coordinates	
	MF44.06	Pythagoras: Worded Questions	
	MF44.07	Pythagoras: Applied Questions	
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA	
	MF45.02	Trigonometry: Using a Calculator	
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)	
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)	
	MF45.05	Trigonometry: Missing Angle	
	MF45.06	Trigonometry: Worded Questions	
	MF45.07	Exact Trigonometric Values	
	MF45.08	Trigonometry and Pythagoras	
	MI45.09	Shortest Distance	(E)
	MI45.10	Simple Trigonometric Equations	(E)
Advanced Trigonometry	MH58.01	Area using 1/2(ab)sin(C): Proof	(E)
	MH58.02	1/2(ab)sin(C): Finding the area	(E)
	MH58.03	1/2(ab)sin(C): Area with Missing Value	(E)
	MH58.04	1/2(ab)sin(C): Applied	(E)
	MH58.05	Sine Rule: Proof	(E)

International Mathematics Course Mapping
Mathematics IGCSE: Cambridge Core & Extended

CENTURY

	MH58.06	Sine Rule: Sides	(E)
	MH58.07	Sine Rule: Angles	(E)
	MH58.08	Sine Rule: Applied	(E)
	MH58.09	Cosine Rule: Proof	(E)
Advanced Trigonometry	MH58.10	Cosine Rule: Finding a	(E)
	MH58.11	Cosine Rule: Finding A	(E)
	MH58.12	Cosine Rule: Applied	(E)
	MH58.13	Choosing the Correct Trigonometric Rule	(E)
	MH58.14	Mixed Trigonometry 1	(E)
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems	(E)
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems	(E)
	MH58.17	Mixed Trigonometry 4: Non-Calculator	(E)
	MH58.18	Mixed Trigonometry 5: Bearings	(E)
	MH59.01	3D Pythagoras 1: Cuboids	(E)
3D Trigonometry	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	(E)
	MH59.03	3D SOH CAH TOA	(E)
	MH59.04	3D Trigonometry	(E)
	MH59.05	3D Trigonometry: Problem Solving	(E)
	MF46.01	Probability Scale in Words	
Probability	MF46.02	Probability Scale in Numbers	
	MF46.03	Calculating Probability	
	MF46.04	Mutually Exclusive Events	

	MF46.05	Two Way Tables: Probability	
	MF46.06	Listing Outcomes	
	MH46.18	Product Rule for Counting	(E)
	MF46.07	Sample Spaces	
	MF46.08	Relative Frequency	
	MF46.09	Expected Frequency	
	MF46.10	Frequency Trees	
	MF46.11	Interpreting Frequency Trees	
	MF46.12	Multiplication Law of Probability (AND)	
	MF46.13	Addition Law of Probability (OR)	
Probability	MH46.19	Addition Law of Probability (General OR)	(E)
	MF46.14	Tree Diagrams 1: Completing Diagrams	
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome	
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes	
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)	
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)	(E)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)	
	MH46.22	Tree Diagrams 7: NOT Statements	(E)
	MH46.23	Tree Diagrams 8: Reverse	(E)
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)	(E)
	MH46.25	Tree Diagrams 10: Conditional Probability (Multiple Outcomes)	(E)

Probability			
	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)	(E)
	MH46.27	Tree Diagrams 12: Algebraic Expressions	(E)
	MH46.28	Tree Diagrams 13: Solving Equations	(E)

Sets and Venn Diagrams			
	MF47.01	Set Notation	
	MI47.21	Rational and Irrational Numbers	
	MF47.02	Elements in a Set 1: Identifying Elements	
	MF47.03	Elements in a Set 2: Unions and Intersections	
	MF47.04	Elements in a Set 3: Complements	
	MI47.25	Subsets: Introduction	(E)
	MI47.23	Subsets: Proper Subsets	(E)
	MI47.24	Subsets: Problem Solving	(E)
	MF47.05	Introduction to Venn Diagrams	
	MF47.06	Constructing Venn Diagrams 1: Listing Elements	
	MF47.07	Constructing Venn Diagrams 2: Writing Values	
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams	(E)
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams	
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)	(E)
	MH47.14	Venn Diagrams: Complements	(E)
	MH47.15	Venn Diagrams with Algebra	(E)
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams	
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)	

Sets and Venn Diagrams			
	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	(E)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)	(E)
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)	(E)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)	
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)	(E)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	(E)

Collecting Data		
	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
	MF48.03	Tally Chart
	MF48.04	Questionnaires
	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples
	MF48.07	Grouped Tally Charts: Discrete and Continuous

Analysing Data		
	MF49.01	Mode
	MF49.02	Median
	MF49.03	Mean 1: Positive Integers
	MF49.04	Mean 2: Decimals and Negatives
	MF49.05	Mean 3: Finding Missing Values
	MF49.06	Mean 4: Changing Means
	MF49.07	Range 1: Positive Integers

	MF49.08	Range 2: Decimals and Negatives
	MF49.09	Applying Averages and the Range 1: Raw Data
	MF49.10	Mode from Frequency Table
	MF49.11	Median from Frequency Table
	MF49.12	Mean from Frequency Table
	MF49.13	Range from Frequency Table
Analysing Data	MF49.14	Modal Class from Grouped Frequency Table Ⓔ
	MF49.15	Median from Grouped Frequency Table Ⓔ
	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data Ⓔ
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data Ⓔ
	MF49.18	Range from Grouped Frequency Table Ⓔ
	MF49.19	Applying Averages and the Range 2: Tables Ⓔ
	MF49.20	Using Averages and Range
	MF49.21	Using Averages and Range: Comparing Two Data Sets
	MF50.01	Completing Two Way Tables
	MF50.02	Interpreting Two Way Tables
Displaying Data	MF50.03	Pictograms
	MF50.04	Bar Charts
	MF50.05	Multiple and Composite Bar Charts
	MF50.06	Vertical Line Graphs
	MF50.07	Creating Stem and Leaf Diagrams

	MF50.08	Interpreting Stem and Leaf Diagrams
	MF50.09	Creating Pie Charts (No Calculator)
	MF50.10	Creating Pie Charts (Calculator)
	MF50.11	Interpreting Pie Charts
	MF50.12	Time Series Graphs
	MF50.13	Drawing Scatter Graphs
Displaying Data	MF50.14	Interpreting Scatter Graphs 1: Introduction
	MF50.15	Interpreting Scatter Graphs 2: Outliers
	MF50.16	Frequency Polygons: Drawing
	MF50.17	Frequency Polygons: Interpreting
	MF50.18	Interpreting Misleading Data Representations
	MH61.01	Frequency Density 1: Calculating Ⓒ
	MH61.03	Histograms 1: Choosing Axes Ⓒ
	MH61.04	Histograms 2: Plotting Ⓒ
	MH60.01	Cumulative Frequency 1: Calculating Ⓔ
	MH60.02	Cumulative Frequency 2: Drawing Ⓔ
Cumulative Frequency and Box Plots	MH60.03	Cumulative Frequency 3: Calculating Frequency Ⓔ
	MH60.04	Cumulative Frequency 4: Finding Values Ⓔ
	MH60.05	Cumulative Frequency 5: Median Ⓔ
	MH60.06	Cumulative Frequency 6: Quartiles Ⓔ
	MH60.07	Cumulative Frequency 7: Interquartile Range Ⓔ
	MH60.08	Cumulative Frequency 8: Plot and Evaluate Ⓔ

	MI60.15	Cumulative Frequency 9: Percentiles	(E)
	MH60.09	Box Plots 1: Interpret	(E)
	MH60.10	Box Plots 2: Finding Values to Plot	(E)
Cumulative Frequency and Box Plots	MH60.11	Box Plots 3: Draw from List	(E)
	MH60.12	Box Plots 4: Draw from Data	(E)
	MH60.13	Box Plots 5: Evaluate and Compare	(E)
	MH60.14	Cumulative Frequency and Box Plots	(E)
	MH61.01	Frequency Density 1: Calculating	(E)
	MH61.02	Frequency Density 2: Problem Solving	(E)
	MH61.03	Histograms 1: Choosing Axes	(E)
	MH61.04	Histograms 2: Plotting	(E)
	MH61.05	Histograms 3: Calculating Frequency	(E)
	MH61.06	Histograms 4: Calculating Frequency within a Given Range	(E)
Histograms	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)	(E)
	MH61.08	Histograms 6: Finding Fractions and Percentages	(E)
	MH61.09	Histograms 7: Finding Proportions	(E)
	MH61.10	Histograms 8: Median	(E)
	MH61.11	Histograms 9: Mean	(E)
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)	(E)

Course Content
Mathematics IGCSE: Cambridge Core & Extended (2025+)

Course Mathematics IGCSE: Cambridge (Core) 2025+
Diagnostics 81   **Strands** 59   **Nuggets** 670

Course Mathematics IGCSE: Cambridge (Extended) 2025+
Diagnostics 137   **Strands** 72   **Nuggets** 982

These courses cover all content required at secondary (KS3 and KS4) for those targeting the Cambridge Core or Extended IGCSE for examination in 2025 - 2027.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Ⓒ **Core Only**   Ⓔ **Extended Only**

Strand	Nuggets	Course
Diagnostics	10	
Extended Diagnostics	12	
Topic Diagnostics: Number	29	
Topic Diagnostics: Ratio and Proportion	7	
Topic Diagnostics: Algebra	23	
Topic Diagnostics: Graphs	11	

Topic Diagnostics: Geometry	28
Topic Diagnostics: Measures	9
Topic Diagnostics: Probability	6
Topic Diagnostics: Statistics	9
Simple Arithmetic	14
Understanding Number	13
Four Operations	19
Working with Fractions	41
Factors, Multiples and Primes	20
Working with Decimals	14
Introduction to Percentages (NC)	15
Fractions, Decimals and Percentages	19
Recurring Decimals	8
Rounding	24
Percentages Non-Calculator	6
Percentages Calculator	20
Powers and Roots	7
Surds	16
Indices	24
Standard Form	10
Ratio	22
Ratio and Proportion	16
Introduction to Algebra	18
Expanding and Factorising	25

Solving Linear Equations	33	Scale Drawings and Bearings	10
Solving Quadratic Equations	14	Transformations	24
Completing the Square	9	Circle Theorems	16
Algebraic Fractions	13	Vectors	14
Formulae	11	Construction and Loci	10
Algebraic Proof	4	Similarity	10
Functions	19	Pythagoras	7
Sequences	22	Right-Angled Trigonometry	10
Straight Line Graphs	26	Advanced Trigonometry	18
Quadratic and Other Graphs	36	3D Trigonometry	5
Inequalities	23	Probability	28
Calculus	11 Ⓔ	Sets and Venn Diagrams	24
Introduction to Geometry	16	Collecting Data	7
Angles	12	Analysing Data	21
Angles in Polygons	11	Displaying Data	18
2D Shapes	7	Cumulative Frequency and Box Plots	15
Perimeter	6	Histograms	12
Area	9		
Circles	19		
3D Shapes	4		
Volume	18		
Surface Area	9		
Measure	22		
Time and Money	12		
Compound Measure	25		

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

C Core Only   **E** Extended Only

Strand	Code	Nugget Name	Course
Diagnostics	MF0.01	Diagnostic: Number 1	
	MF0.02	Diagnostic: Algebra 1	
	MF0.30	Diagnostic: Ratio and Proportion 1	
	MF0.03	Diagnostic: Geometry 1	
	MF0.04	Diagnostic: Number 2	
	MF0.05	Diagnostic: Probability 1	
	MF0.06	Diagnostic: Statistics 1	
	MF0.07	Diagnostic: Algebra 2	
	MF0.31	Diagnostic: Ratio and Proportion 2	
	MI0.33	Diagnostic: Geometry 2	**C**
	MF0.08	Diagnostic: Geometry 2	**E**
Extended Diagnostics	MH0.09	Diagnostic: Number 3	**E**
	MH0.10	Diagnostic: Number 4	**E**
	MH0.11	Diagnostic: Algebra 3	**E**
	MH0.12	Diagnostic: Algebra 4	**E**
	MH0.13	Diagnostic: Algebra 5	**E**
	MH0.32	Diagnostic: Ratio and Proportion 3	**E**
	MH0.14	Diagnostic: Geometry 3	**E**

Strand	Code	Nugget Name	Course
Extended Diagnostics	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	**E**
	MH0.16	Diagnostic: Statistics 2	**E**
	MH0.17	Diagnostic: Probability 2	**E**
	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	**E**
	MI0.19	Diagnostic: Calculus	**E**
Topic Diagnostics: Number	MF00.01	Topic Diagnostic: Times Tables	
	MF00.02	Topic Diagnostic: Calculations 1	
	MF00.03	Topic Diagnostic: Calculations 2	
	MF00.04	Topic Diagnostic: Negative Numbers	
	MF00.05	Topic Diagnostic: Decimals	
	MH00.01	Topic Diagnostic: Rounding and Estimating	**E**
	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator	
	MF00.07	Topic Diagnostic: Fractions	
	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction	
	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division	
	MF00.10	Topic Diagnostic: Fractions of an Amount	
	MF00.11	Topic Diagnostic: Factors, Multiples and Primes	
	MF00.12	Topic Diagnostic: LCM and HCF 1	
	MH00.02	Topic Diagnostic: LCM and HCF 2	**E**
	MF00.13	Topic Diagnostic: Percentages	
	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages	
	MH00.03	Topic Diagnostic: Recurring Decimals	**E**

Topic Diagnostics: Number	MF00.15	Topic Diagnostic: Bounds 1	
	MH00.04	Topic Diagnostic: Bounds 2	Ⓔ
	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest	
	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse	
	MH00.05	Topic Diagnostic: Exponential Growth and Decay	Ⓔ
	MF00.18	Topic Diagnostic: Powers and Roots	
	MH00.06	Topic Diagnostic: Surds	Ⓔ
	MF00.19	Topic Diagnostic: Laws of Indices 1	
	MH00.07	Topic Diagnostic: Laws of Indices 2	Ⓔ
	MH00.08	Topic Diagnostic: Fractional Indices	Ⓔ
	MH00.09	Topic Diagnostic: Solving Problems with Indices	Ⓔ
	MF00.20	Topic Diagnostic: Standard Form	
Topic Diagnostics: Ratio and Proportion	MF00.21	Topic Diagnostic: Ratio	
	MF00.22	Topic Diagnostic: Ratio: Sharing 1	
	MH00.10	Topic Diagnostic: Ratio: Sharing 2	Ⓔ
	MF00.23	Topic Diagnostic: Proportion	
	MI00.01	Topic Diagnostic: Direct and Inverse Proportion 1	Ⓒ
	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	Ⓔ
	MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	Ⓔ
Topic Diagnostics: Algebra	MF00.25	Topic Diagnostic: Simple Algebra	
	MF00.26	Topic Diagnostic: Expanding and Factorising Single Brackets	

Topic Diagnostics: Algebra	MF00.27	Topic Diagnostic: Expanding and Factorising Double Brackets	
	MH00.12	Topic Diagnostic: Factorising Non-monic Quadratics	Ⓔ
	MF00.28	Topic Diagnostic: Solving Linear Equations 1	
	MF00.29	Topic Diagnostic: Solving Linear Equations 2	
	MF00.30	Topic Diagnostic: Solving Simultaneous Linear Equations	
	MH00.13	Topic Diagnostic: Iteration	Ⓔ
	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
	MH00.14	Topic Diagnostic: The Quadratic Formula	Ⓔ
	MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	Ⓔ
	MH00.16	Topic Diagnostic: Completing the Square	Ⓔ
	MH00.17	Topic Diagnostic: Algebraic Fractions	Ⓔ
	MF00.32	Topic Diagnostic: Formulae	
	MH00.18	Topic Diagnostic: Algebraic Proof	Ⓔ
	MH00.19	Topic Diagnostic: Functions	Ⓔ
	MH00.20	Topic Diagnostic: Composite Functions	Ⓔ
	MH00.21	Topic Diagnostic: Inverse Functions	Ⓔ
	MF00.33	Topic Diagnostic: Sequences	
	MH00.22	Topic Diagnostic: Quadratic Sequences	Ⓔ
	MF00.34	Topic Diagnostic: Inequalities	
	MF00.35	Topic Diagnostic: Solving Inequalities 1	
	MH00.23	Topic Diagnostic: Solving Inequalities 2	Ⓔ

Topic Diagnostics: Measures	MF00.63	Topic Diagnostic: Compound Measures: Speed	
	MI00.04	Topic Diagnostic: Compound Measures: Density	Ⓒ
	MF00.64	Topic Diagnostic: Compound Measures: Density	Ⓔ
	MH00.39	Topic Diagnostic: Velocity-time Graphs	Ⓔ
Topic Diagnostics: Probability	MF00.65	Topic Diagnostic: Probability 1	
	MH00.40	Topic Diagnostic: Probability 2	Ⓔ
	MF00.66	Topic Diagnostic: Tree Diagrams 1	
	MH00.41	Topic Diagnostic: Tree Diagrams 2	Ⓔ
	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	Ⓔ
Topic Diagnostics: Statistics	MF00.68	Topic Diagnostic: Collecting Data	
	MF00.69	Topic Diagnostic: Displaying Data	
	MI00.06	Topic Diagnostic: Averages and the Range	Ⓒ
	MF00.70	Topic Diagnostic: Averages and the Range	Ⓔ
	MI00.05	Topic Diagnostic: Averages and the Range from a Frequency Table	Ⓒ
	MF00.71	Topic Diagnostic: Averages and the Range from a Frequency Table	Ⓔ
	MH00.43	Topic Diagnostic: Cumulative Frequency	Ⓔ
	MH00.45	Topic Diagnostic: Histograms	Ⓔ
Simple Arithmetic	MF1.01	Addition	
	MF1.02	Subtraction	
	MF1.03	Addition and Subtraction	
	MF1.04	Times Tables: 2, 5 and 10	

Simple Arithmetic	MF1.05	Times Tables: 3 and 4
	MF1.06	Times Tables: 6 and 7
	MF1.07	Times Tables: 8 and 9
	MF1.08	Times Tables: 11 and 12
	MF1.09	Commutative Law
	MF1.10	Associative Law
	MF1.11	Division: 1, 2, 3, 4, 5 and 10
	MF1.12	Division: 6, 7, 8, 9, 11 and 12
	MF1.13	Division: Mixed
	MF1.14	Distributive Law
Understanding Number	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
	MF2.05	Adding Negatives
	MF2.06	Subtracting Negatives
	MF2.07	Negatives and Positives
	MF2.08	Ordering Integers
	MF2.09	Ordering Decimals
	MF2.10	Ordering Negatives
	MF2.11	Multiplying by Powers of Ten
	MF2.12	Dividing by Powers of Ten
	MF2.13	Rounding to the nearest 10, 100 and 1000

	MF3.01	Column Addition
Four Operations	MF3.02	Column Subtraction
	MF3.03	Addition and Subtraction: Worded Questions
	MF3.04	Multiplying Negatives
	MF3.05	Dividing Negatives
	MF3.06	Multiplying and Dividing with Negatives
	MF3.07	Column Multiplication
	MF3.08	Grid Multiplication
	MF3.09	Multiplication with Napier's Bones
	MF3.10	Testing for Divisibility
Four Operations	MF3.11	Short Division
	MF3.19	Long Division
	MF3.12	Dividing by Multi-Digit Numbers
	MF3.13	Multiplication and Division: Worded Questions
	MF3.14	BIDMAS Introduction
	MF3.15	BIDMAS Intermediate
	MF3.16	BIDMAS Advanced
	MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
	MF3.18	Using a Calculator 2: Multiple Numbers
Working with Fractions	MF4.01	Expressing Fractions
	MF4.02	Ordering Fractions
	MF4.03	Equivalent Fractions
	MF4.04	Simplifying Fractions
	MF4.05	Shading Fractions

	MF4.06	Mixed and Improper Fractions
Working with Fractions	MF4.07	Adding Fractions 1: Same Denominator
	MF4.08	Adding Fractions 2: Convert 1 Denominator
	MF4.09	Adding Fractions 3: Convert 1 Denominator (Sum >1)
	MF4.10	Adding Fractions 4: Convert all Denominators
	MF4.36	Fractions: Subtracting from 1
	MF4.11	Subtracting Fractions
	MF4.12	Adding and Subtracting Fractions
	MF4.13	Adding Improper Fractions
	MF4.14	Adding Mixed Numbers
	MF4.15	Adding Improper Fractions and Mixed Numbers
	MF4.16	Subtracting Improper Fractions
	MF4.17	Subtracting Mixed Numbers
	MF4.18	Subtracting Improper Fractions and Mixed Numbers
	MF4.19	Adding and Subtracting Improper Fractions
	MF4.20	Adding and Subtracting Mixed Numbers
	MF4.21	Adding and Subtracting Improper Fractions and Mixed Numbers
	MF4.37	Fractions on a Number Line 1: Between 0 and 1
	MF4.38	Fractions on a Number Line 2: Beyond 1
	MF4.22	Reciprocals
	MF4.23	Multiplying Fractions 1
	MF4.24	Multiplying Fractions 2
	MF4.25	Dividing Fractions

Working with Fractions	MF4.26	Multiplying and Dividing Mixed Numbers
	MF4.27	Multiplying with Whole Numbers and Fractions
	MF4.28	Dividing with Whole Numbers and Fractions
	MF4.39	Fraction of Amounts: Modelling
	MF4.29	Fraction of Amounts: Non-Calculator
	MF4.30	Fraction of Amounts: Calculator
	MF4.31	Increasing and Decreasing by Fractions
	MF4.40	Fraction of Amounts: Modelling Finding the Whole
	MF4.32	Reverse Fractions
	MF4.33	Reverse Fractions: Worded Questions
	MF4.34	Estimating Products of Fractions
	MF4.35	Dividing Fractions (Bar Model)
	MH4.34	Applied Fractions Ⓔ

Factors, Multiples and Primes	MF5.01	Odds and Evens with Addition and Subtraction
	MF5.02	Odds and Evens with Multiplication
	MF5.03	Primes
	MF5.04	Multiples
	MF5.05	Factors
	MF5.06	Multiples and Factors
	MF5.07	Lowest Common Multiple - Listing Technique
	MF5.08	Highest Common Factor - Listing Technique
	MF5.09	Prime Factorisation 1: Factor Tree Given

Factors, Multiples and Primes	MF5.10	Prime Factorisation 2
	MF5.11	Uses of Prime Factorisation
	MF5.12	HCF Using Prime Factorisation: Venn Diagrams
	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors
	MF5.14	LCM Using Prime Factorisation: Venn Diagrams
	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors
	MF5.16	HCF and LCM with Prime Factorisation
	MH5.17	HCF and LCM of 3 Numbers Ⓔ
	MH5.18	Solving Problems with HCF and LCM 1 Ⓔ
	MH5.19	Solving Problems with HCF and LCM 2 Ⓔ
	MH5.20	Solving Problems with HCF and LCM 3: Reverse Ⓔ

Working with Decimals	MF6.01	Decimal Place Value
	MF6.02	Adding Decimals 1: Calculations
	MF6.03	Adding Decimals 2: Worded Problems
	MF6.04	Subtracting Decimals 1: Calculations
	MF6.05	Subtracting Decimals 2: Worded Problems
	MF6.06	Multiplying Decimals 1
	MF6.07	Multiplying Decimals 2
	MF6.08	Multiplying Decimals: Worded Questions
	MF6.09	Dividing Decimals
	MF6.10	Dividing Decimals by Decimals
	MF6.11	Dividing by Large Numbers

Working with Decimals	MF6.12	Manipulating Decimal Calculations with Multiplication
	MF6.13	Manipulating Decimal Calculations with Division
	MF6.14	Multiplying Decimals with Napier's Bones
Introduction to Percentages (NC)	MF7.01	Understanding Percentages
	MF7.02	Finding 50%
	MF7.03	Finding 25%
	MF7.04	Finding 10%
	MF7.05	Finding 5%
	MF7.06	Finding 1%
	MF7.07	Finding Multiples of Tens in Percentages
	MF7.15	Percentages of Amounts: Modelling
	MF7.08	Finding Percentages of Amounts 1
	MF7.09	Finding Percentages of Amounts 2
	MF7.10	Finding Percentages of Amounts 3
	MF7.11	Comparing Percentages 1: Multiples of 5%
	MF7.12	Comparing Percentages 2
	MF7.13	Finding Decimal Percentages
	MF7.14	Estimate with Percentages
Fractions, Decimals and Percentages	MF8.01	Introduction to Fractions, Decimals and Percentages
	MF8.02	Converting Fractions to Denominator 100
	MF8.03	Fractions to Percentage
	MF8.04	Decimals to Percentage

Fractions, Decimals and Percentages	MF8.05	Percentage to Decimals	
	MF8.06	Fractions to Decimals 1: Equivalent Fractions	
	MF8.07	Fractions to Decimals 2: Division	
	MF8.08	Percentage to Fractions	
	MF8.09	Decimals to Fractions	
	MF8.10	Fractions to Decimals (Calculator)	
	MF8.11	Fractions to Percentages (Calculator)	
	MF8.12	Percentage to Fractions (Calculator)	
	MF8.13	Decimals to Fractions (Calculator)	
	MF8.14	Ordering Fractions, Decimals and Percentages 1: Unit Fractions (Non-Calculator)	
	MF8.15	Ordering Fractions, Decimals and Percentages 2: Non-Unit Fractions (Non-Calculator)	
	MF8.16	Ordering Fractions, Decimals and Percentages 3: Numbers Less than 1 (Calculator)	
	MF8.17	Ordering Fractions, Decimals and Percentages 4: Numbers More than 1 (Calculator)	
	MF8.18	Converting Percentage (Less than 1%)	
	MF8.19	Converting Percentage (Greater than 100%)	
Recurring Decimals	MH51.01	Fractions to Recurring Decimals 1: Special Cases	Ⓔ
	MH51.02	Fractions to Recurring Decimals 2: Long Division	Ⓔ
	MH51.03	Fractions to Recurring Decimals 3: Long Division (Numbers > 1)	Ⓔ
	MH51.04	Recurring Decimals 1: 1–2 Digits	Ⓔ
	MH51.05	Recurring Decimals 2: 2–4 Digits	Ⓔ

Recurring Decimals	MH51.06	Recurring Decimals 3: Non-Recurring and Recurring Digits	(E)
	MH51.07	Recurring Decimals 4: Special Cases	(E)
	MH51.08	Recurring Decimals 5: Calculations	(E)
Rounding	MF9.01	Rounding to the Nearest Whole Number	
	MF9.02	Rounding to 1 Decimal Place	
	MF9.03	Rounding to 2 Decimal Places	
	MF9.04	Rounding to Mixed Decimal Places	
	MF9.05	Rounding to 1 Significant Figure	
	MF9.06	Rounding to 2 Significant Figures	
	MF9.07	Rounding to 3 Significant Figures	
	MF9.08	Rounding to Mixed Significant Figures	
	MF9.09	Mixed Rounding	
	MF9.10	Rounding to Appropriate Degrees of Accuracy	
	MF9.11	Introduction to Estimation	
	MF9.12	Estimation	
	MF9.13	Bounds 1: Introduction	
	MF9.14	Bounds 2: Simple Calculation	
	MF9.15	Bounds 3: Intervals	
	MH9.16	Bounds 4: Addition	(E)
	MH9.17	Bounds 5: Subtraction	(E)
	MH9.18	Bounds 6: Multiplication	(E)
	MH9.19	Bounds 7: Division	(E)

Rounding	MH9.20	Bounds 8: Mixed Operations	(E)
	MH9.21	Bounds 9: Formulae	(E)
	MH9.22	Bounds 10: Suitable Degrees of Accuracy	(E)
	MH9.23	Bounds 11: Discrete Variables	(E)
	MH9.24	Truncation	(E)
Percentages Non-Calculator	MF10.06	Percentage Increase and Decrease: Modelling	
	MF10.01	Percentage Increase	
	MF10.02	Percentage Decrease	
	MF10.03	Percentage Increase and Decrease	
	MF10.04	Finding Percentages greater than 100	
	MF10.05	Simple Interest	
Percentages Calculator	MF11.01	Finding Percentages 1: Integer Percentages < 100% (Calculator)	
	MF11.02	Finding Percentages 2: > 100% or Non-Integer Percentages (Calculator)	
	MF11.03	Percentage Increase and Decrease (Calculator)	
	MF11.04	Percentage Change	
	MF11.05	Repeated Percentage Increase and Decrease (Calculator)	
	MF11.06	Simple Interest (Calculator)	
	MF11.07	Compound Interest (Calculator)	
	MF11.08	Depreciation (Calculator)	
	MF11.09	Compound Interest and Depreciation (Calculator)	
	MF11.10	Simple and Compound Interest (Calculator)	

Percentages Calculator	MF11.18	Reverse Percentages Introduction: Modelling	
	MF11.19	Reverse Percentages: Modelling	
	MF11.11	Reverse Percentage	
	MF11.12	Percentage Error	
	MF11.13	Express One Amount as a Percentage of Another	
	MF11.14	Percentage Problems	
	MH11.14	Exponential Growth	
	MH11.15	Exponential Decay	(E)
	MH11.16	Exponential Growth and Decay	(E)
	MI11.17	Earnings, Profit and Loss	
Powers and Roots	MF12.01	Squares	
	MF12.02	Cubes	
	MF12.03	Squaring and Cubing Negatives	
	MF12.04	Powers	
	MF12.05	Roots of Squares and Cubes	
	MF12.06	Roots	
	MH12.07	Estimating Powers and Roots	(E)
Surds	MH52.01	Surds: Introduction	(E)
	MH52.02	Surds: Multiplication and Division	(E)
	MH52.03	Surds: Simplifying 1	(E)
	MH52.04	Surds: Simplifying 2 (Products of Surds)	(E)
	MH52.05	Surds: Simplifying 3 (Dividing Surds)	(E)

Surds	MH52.06	Surds: Simplifying 4 (Sum and Difference)	(E)
	MH52.07	Surds: Expanding 1 (Single Bracket)	(E)
	MH52.08	Surds: Expanding 2 (Sum/Difference of Single Brackets)	(E)
	MH52.09	Surds: Expanding 3 (Double Brackets)	(E)
	MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	(E)
	MH52.11	Surds: Expanding 5 (Difference of Two Squares)	(E)
	MH52.12	Surds: Rationalising 1 (Monomial Denominator)	(E)
	MH52.13	Surds: Rationalising 2 (Binomial Denominator)	(E)
	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)	(E)
	MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)	(E)
	MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)	(E)
Indices	MF13.01	Powers of 0 and 1	
	MF13.02	Raising a Fraction to a Power	
	MF13.03	Multiplying Indices	
	MF13.04	Dividing Indices	
	MF13.05	Power of a Power	
	MF13.06	Negative Indices	
	MF13.07	Combination of Indices	
	MH13.08	Fractional Indices 1: Square and Cube Root	(E)
	MH13.09	Fractional Indices 2: Non-Unit Fraction	(E)

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	MH13.10	Fractional Indices 3: Negative Unit Fractions	Ⓔ
	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions	Ⓔ
	MH13.12	Fractional Indices 5: Fraction Base	Ⓔ
	MH13.13	Fractional Indices: Calculator	Ⓔ
	MH13.14	Solving Problems with Indices 1: Combination of Rules	Ⓔ
	MH13.15	Solving Problems with Indices 2: Combination of Rules	Ⓔ
	MH13.16	Solving Problems with Indices 3: Working Backwards	Ⓔ
Indices	MH13.17	Solving Problems with Indices 4: Solving Equations	Ⓔ
	MH13.18	Solving Problems with Indices 5: Including Square/Cube Root Form	Ⓔ
	MH13.19	Solving Problems with Indices 6: Challenge	Ⓔ
	MH13.20	Solving Problems with Indices 7: Challenge	Ⓔ
	MH13.21	Exponential Equations 1: Introduction	Ⓔ
	MH13.22	Exponential Equations 2: Quadratics (Changing One Base)	Ⓔ
	MH13.23	Exponential Equations 3: Quadratics (Changing Multiple Bases)	Ⓔ
	MH13.24	Exponential Equations 4: Challenge	Ⓔ
	MF14.01	The Positive Powers of 10	
	MF14.02	The Negative Powers of 10	
Standard Form	MF14.03	Standard Form to Ordinary	
	MF14.04	Ordinary to Standard Form	
	MF14.05	Fixing into Standard Form	
	MF14.06	Ordering Standard Form	

	MF14.07	Adding and Subtracting with Standard Form	
Standard Form	MF14.08	Multiplying with Standard Form	
	MF14.09	Dividing with Standard Form	
	MF14.10	Standard Form: Worded problems with calculator	
	MF15.01	Introduction to Ratio	
	MF15.02	Simplifying Ratios	
	MF15.03	Converting Ratios into the Form 1:n	
	MF15.04	Converting Ratios into the Form n:1	
	MF15.05	3 Part Ratios	
	MF15.06	Simplifying Ratios with Units	
	MF15.15	Sharing with a Given Ratio: Modelling	
	MF15.16	Ratio Fluency: Modelling	
	MF15.07	Sharing with a Given Ratio 1	
Ratio	MF15.08	Sharing with a Given Ratio 2 (Calculator)	
	MF15.09	Sharing with a Given Ratio 3 (Calculator): Working Backwards	
	MF15.10	Sharing with a Given Ratio 4 (Calculator): 3 Part Ratios	
	MF15.11	Converting Ratios into Fractions	
	MF15.12	Converting Fractions into Ratios	
	MF15.13	Part of a Ratio to the Whole	
	MF15.14	Ratio and Algebra	
	MF15.17	Ratio: Problem Solving	
	MF15.18	Ratio: Two Ratios	

Ratio	MF15.19	Ratio: Angles	
	MF15.20	Ratio: Applied	
	MH15.21	Ratio: Applied (Advanced)	(E)
	MH15.22	Ratio: Changing Ratios	(E)

Ratio and Proportion	MF16.01	Introduction to Proportion	
	MF16.02	Recipe Ratio 1: Find Amount of Ingredients	
	MF16.03	Recipe Ratio 2: Find the Number of People	
	MF16.04	Better Value	
	MF16.05	Direct Proportion 1: Conversions	
	MF16.06	Direct Proportion 2: y = kx	(E)
	MF16.07	Inverse Proportion 1: Introduction	
	MF16.08	Inverse Proportion 2: y = k/x	(E)
	MF16.09	Proportions on a Graph	
	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence	
	MH16.10	Direct Proportion 3: y = kxª and y = k√x	(E)
	MH16.11	Inverse Proportion 3: y = k/xª and y = k/√x	(E)
	MH16.12	Interpreting Direct and Inverse Proportion 1: y = kx and y = k/xª	(E)
	MH16.13	Interpreting Direct and Inverse Proportion 2: Problem Solving	(E)
	MH16.14	Proportions on a Graph 2: Linear, Quadratic, Cubic and Root	(E)
	MH16.15	Two Step Direct and Inverse Proportion	(E)

Introduction to Algebra	MF17.01	Forming Algebraic Expressions: One Step	
	MF17.02	Forming Algebraic Expressions: Two Step	
	MF17.03	Algebraic Terminology	
	MF17.04	Collecting Like Terms 1: Add and Subtract	
	MF17.05	Collecting Like Terms 2: Add and Subtract (Including Squared/Cubed Variables)	
	MF17.06	Collecting Like Terms 3: In Context (Perimeter)	
	MF17.07	Simplifying Expressions 1: Multiplication	
	MF17.08	Simplifying Expressions 2: Multiplication (In Context)	
	MF17.09	Simplifying Expressions 3: Division	
	MF17.10	Simplifying Expressions 4: Division	
	MF17.11	Simplifying Expressions 5: Multiplication and Division	
	MH17.17	Simplifying Expressions 6: Index Laws	(E)
	MH17.18	Simplifying Expressions 7: Index Laws	(E)
	MF17.12	Function Machines	
	MF17.13	Substitution into Expressions 1: One Term	
	MF17.14	Substitution into Expressions 2: Two Terms	
	MF17.15	Substitution into Expressions 3: Two Terms incl. Squares	
	MF17.16	Substitution into Expressions 4: Calculator	

Expanding and Factorising	MF18.25	Expanding Single Brackets: Introduction	
	MF18.01	Expanding Single Brackets 1: a(x ± b)	
	MF18.02	Expanding Single Brackets 2: ±a(x ± b)	
	MF18.03	Expanding Single Brackets 3: ±a(±bx ± cy)	

Solving Linear Equations	MF19.18	Generating Equations from Words	
	MF19.19	Generating Equations from Diagrams	
	MF19.20	Simultaneous Equations: Introduction	
	MF19.21	Simultaneous Equations 1	
	MF19.22	Simultaneous Equations 2: Scale One Equation	
	MF19.23	Simultaneous Equations 3: Scale Both Equations	
	MF19.24	Simultaneous Equations 4: Rearranging	
	MF19.25	Simultaneous Equations: Substitution	
	MH19.27	Iteration 1: Find Solution Between	(E)
	MH19.28	Iteration 2: Rearrange Iterative Formula	(E)
	MH19.29	Iteration 3: Recursive Iteration	(E)
	MF19.26	Simultaneous Equations: Worded Questions	
Solving Quadratic Equations	MF20.01	Solving Quadratics 1: $x^2 + b = 0$	
	MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$	
	MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$	
	MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)	
	MH20.05	The Discriminant	(E)
	MH20.06	Quadratic Formula 1: Identify A, B and C	(E)
	MH20.07	Quadratic Formula 2: Applying the Formula	(E)
	MH20.08	Quadratic Formula 3: Applying the Formula	(E)
	MH20.09	Quadratic Formula 4: Give Answer in Form $(p \pm \sqrt{q})/r$	(E)
	MH20.10	Quadratic Formula 5: In Context	(E)

Solving Quadratic Equations	MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)	(E)
	MH20.12	Solving Quadratics 6: $ax^2 + bx + c = 0$ (a is Not Prime)	(E)
	MH20.13	Solving Quadratics 7: Challenge	
	MH20.14	Quadratic Simultaneous Equations	
Completing the Square	MH53.01	Completing the Square 1: $(x + q)^2 + r$	
	MH53.02	Completing the Square 2: $(x + q/2)^2 + r$	
	MH53.03	Completing the Square 3: $p(x + q)^2 + r$	
	MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$	
	MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$	
	MH53.06	Completing the Square to Solve Equations 2: $x^2 + bx + c$ (Including Fractions)	
	MH53.07	Completing the Square to Solve Equations 3: $ax^2 + bx + c$	
	MH53.08	Completing the Square to Solve Equations 4: Mixed Exercise	
	MH53.09	Completing the Square: Turning Points	
Algebraic Fractions	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)	
	MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)	(E)
	MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)	(E)
	MH54.04	Algebraic Fractions 4: Simplify (Binomial Factors)	(E)
	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)	(E)
	MH54.06	Algebraic Fractions 6: Add and Subtract (Monomial as Denominator)	(E)
	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)	(E)

Algebraic Fractions			
	MH54.08	Algebraic Fractions 8: Multiply	(E)
	MH54.09	Algebraic Fractions 9: Multiply	(E)
	MH54.10	Algebraic Fractions 10: Factorise then Multiply	(E)
	MH54.11	Algebraic Fractions 11: Divide	(E)
	MH54.12	Algebraic Fractions 12: Solve	(E)
	MH54.13	Algebraic Fractions 13: Problem Solving	(E)

Formulae			
	MF21.01	Generating Formulae	
	MF21.02	Substituting into a Formula	
	MF21.03	Using Kinematics	
	MF21.04	Recalling and Using Formulae 1	
	MH21.11	Recalling and Using Formulae 2	(E)
	MF21.05	Rearranging Formulae: One Step	
	MF21.06	Rearranging Formulae: Two Step	
	MF21.07	Rearranging Formulae: Negative Subject	
	MF21.08	Rearranging Formulae: Unknown in Denominator	
	MF21.09	Rearranging Formulae: With Powers	
	MF21.10	Rearranging Formulae: Unknown on Both Sides	

Algebraic Proof			
	MH55.01	Introduction to Algebraic Proof	(E)
	MH55.02	Algebraic Proof 1: Complete the Proof	(E)
	MH55.03	Algebraic Proof 2	(E)
	MH55.04	Algebraic Proof: Disproving by Example	(E)

Functions			
	MH56.01	Functions: Key Concept	(E)
	MI56.18	Functions: Domain	(E)
	MI56.19	Functions: Range	(E)
	MH56.02	Functions: Substitution 1 (Linear Functions)	(E)
	MH56.03	Functions: Substitution 2 (Quadratic Functions)	(E)
	MH56.04	Functions: Substitution 3 (Challenge)	(E)
	MH56.05	Functions: Solving	(E)
	MH56.06	Functions: Algebraic	(E)
	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)	(E)
	MH56.08	Composite Functions: Substitution 2 (2 Non-Linear Functions)	(E)
	MH56.09	Composite Functions: Substitution 3 (3 Functions)	(E)
	MH56.10	Composite Functions: Substitution 4 (Quadratic Functions	(E)
	MH56.11	Composite Functions: Solving	(E)
	MH56.12	Composite Functions: Algebraic	(E)
	MH56.13	Inverse Functions 1: Linear	(E)
	MH56.14	Inverse Functions 2: Non-Linear	(E)
	MH56.15	Inverse Functions: Substitution	(E)
	MH56.16	Inverse Functions: Solving	(E)
	MH56.17	Composite and Inverse Functions	(E)

Sequences			
	MF22.01	Continuing Sequences	
	MF22.02	Linear Sequences: Finding the Term-to-Term Rule	
	MF22.03	Linear Sequences: Using the Term-to-Term Rule	

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	MF22.04	Linear Sequences with Diagrams 1: Term-to-Term Rule
	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
	MI22.20	Sequences: $a + (n - 1)d$ (E)
	MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)
	MF22.08	Linear Sequences: Finding the nth Term 2 (Decreasing)
	MI22.21	Sum of Arithmetic Sequences 1 (E)
	MI22.22	Sum of Arithmetic Sequences 2: Reverse (E)
Sequences	MF22.09	Linear Sequences with Diagrams 2: nth Term
	MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
	MF22.11	Important Sequences: Geometric
	MF22.12	Important Sequences: Fibonacci
	MF22.13	Quadratic Sequences: Using the nth Term
	MH22.14	Subscript Notation (E)
	MH22.15	Unusual Sequences (E)
	MH22.16	Quadratic Sequences 1: $n^2 + c$ (E)
	MH22.17	Quadratic Sequences 2: $an^2 + c$ (E)
	MH22.18	Quadratic Sequences 3: $an^2 + bn + c$ (E)
	MH22.19	Quadratic Sequences 4: $an^2 + bn + c$ and $(an + b)^2$ (E)
Straight Line Graphs	MF23.01	Understanding Coordinates: 1st Quadrant
	MF23.02	Understanding Coordinates: 4 Quadrants
	MF23.26	Coordinates and 2D Shapes

	MF23.03	Midpoint of a Line Segment	(E)
	MH23.20	Coordinates and Ratios	(E)
	MF23.04	Horizontal and Vertical Graphs	
	MF23.05	Other Important Linear Graphs	
	MF23.06	Plotting Straight Line Graphs: 1st Quadrant	
	MF23.07	Plotting Straight Line Graphs: 4 Quadrants	
	MF23.08	Finding the Gradient of a Line Segment: Using the Graph	
	MF23.09	Finding the Gradient of a Line Segment: Using the Formula	
	MF23.10	Understanding $y = mx + c$	
Straight Line Graphs	MF23.11	Graphing $y = mx + c$ (1)	
	MF23.12	Graphing $y = mx + c$ (2)	
	MF23.13	Finding $y = mx + c$ from a Gradient and a Point	
	MF23.14	Finding $y = mx + c$ from Two Points	
	MF23.15	Rearranging $y = mx + c$	
	MF23.16	Finding Parallel Lines	
	MH23.21	Finding Perpendicular Lines 1: Gradient	(E)
	MH23.22	Finding Perpendicular Lines 2: Equation	(E)
	MH23.23	Finding Perpendicular Lines 3: Problem Solving	(E)
	MH23.24	Equation of a Tangent 1: Circle Given	(E)
	MH23.25	Equation of a Tangent 2: Mixed Exercise	(E)
	MF23.17	Solving Using Straight Line Graphs	

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Straight Line Graphs	MF23.18	Solving Simultaneous Equations Using Straight Line Graphs 1: Graphs Given	
	MF23.19	Solving Simultaneous Equations Using Straight Line Graphs 2: Graphs Not Given	
Quadratic and Other Graphs	MF24.01	Plotting Simple Quadratic Graphs 1: $y = ax^2 + c$	
	MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$	
	MF24.03	Quadratic Graphs: Finding the y-intercept	
	MF24.04	Quadratic Graphs: Finding the Line of Symmetry	
	MF24.05	Quadratic Graphs: Finding the Turning Point	
	MF24.06	Quadratic Graphs: Finding the Roots	
	MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given	(E)
	MH24.14	Quadratic Graphs: Turning Point from Completing Square 2: $y = (x + q)^2 + r$ Not Given	(E)
	MH24.15	Quadratic Graphs: Turning Point from Completing Square 3: $y = \pm p(x + q)^2 + r$ Not Given	(E)
	MH24.16	Estimating Gradients	(E)
	MI24.38	Exponential Functions: Key Features	(E)
	MH24.18	Trigonometric Functions: Sin Graph	(E)
	MH24.19	Trigonometric Functions: Cos Graph	(E)
	MH24.20	Trigonometric Functions: Tan Graph	(E)
	MH24.37	Trigonometric Functions: Mixed	(E)
	MH24.22	Equations of Circles	(E)
	MF24.07	Plotting Other Polynomial Graphs	
	MF24.08	Plotting Reciprocal Graphs	
	MH24.23	Plotting Exponential Graphs	(E)
Quadratic and Other Graphs	MF24.09	Recognising Key Graphs	
	MF24.10	Approximate Solutions Using a Graph	
	MH24.24	Transforming Graphs: Translating Vertical	(E)
	MH24.25	Transforming Graphs: Translating Horizontal	(E)
	MH24.26	Transforming Graphs: Reflections	(E)
	MH24.27	Transforming Graphs: Stretching y-direction	(E)
	MH24.28	Transforming Graphs: Stretching x-direction	(E)
	MH24.29	Transforming Graphs: Mixed Translations	(E)
	MH24.30	Transforming Graphs: Mixed Stretches	(E)
	MH24.31	Transforming Graphs: Mixed	(E)
	MH24.21	Transforming Graphs: Mixed (Trig Functions)	(E)
	MH24.32	Transforming Graphs: Combined 1	(E)
	MH24.33	Transforming Graphs: Combined 2	(E)
	MH24.34	Areas under Graphs	(E)
	MF24.11	Real Life Graphs: Plotting	
	MF24.12	Real Life Graphs: Interpreting	
	MH24.35	Quadratic Simultaneous Equations Graphically	(E)
	MH24.36	Polynomial Simultaneous Equations Graphically	(E)
Inequalities	MF25.01	Representing Inequalities on a Number Line	
	MF25.02	Representing Two Sided Inequalities on a Number Line	
	MF25.03	Interpreting Inequalities from a Number Line	
	MF25.04	Interpreting Two Sided Inequalities from a Number Line	
	MH25.13	Solving Quadratic Inequalities Graphically	(E)

	MF25.05	Finding Integer Solutions to Inequalities	
	MF25.06	Solving Inequalities: One Step	
	MF25.07	Solving Inequalities: Negative Variable	
	MF25.08	Solving Inequalities: Two Step	
	MF25.09	Solving Inequalities: One Step and Two Sided	
	MF25.10	Solving Inequalities: Multi Step and Two Sided	
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides	
	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line	
Inequalities	MH25.14	Solving Inequalities: Quadratics 1	(E)
	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)	(E)
	MH25.16	Solving Inequalities: Quadratics 3 (Factorising)	(E)
	MH25.17	Solving Multiple Linear Inequalities	(E)
	MH25.18	Regions 1: One Vertical/Horizontal Line	(E)
	MH25.19	Regions 2: One Line of Form y = mx + c	(E)
	MH25.20	Regions 3: Multiple Vertical/Horizontal Lines	(E)
	MH25.21	Regions 4: Multiple Lines of Form y = mx + c	(E)
	MI25.22	Linear Programming 1: Constructing Inequalities	(E)
	MI25.23	Linear Programming 2: Shading and Interpreting	(E)
Calculus	MI62.01	Differentiating Functions 1: Single Term	(E)
	MI62.02	Differentiating Functions 2: Multiple Terms	(E)
	MI62.03	Differentiating Functions 3: Negative Powers	(E)

	MI62.04	Differentiating Functions 4: Involving Expanding	(E)
	MI62.05	Differentiating Functions: Gradient at a Point 1	(E)
	MI62.06	Differentiating Functions: Gradient at a Point 2	(E)
Calculus	MI62.07	Differentiating Functions: Turning Points 1	(E)
	MI62.08	Differentiating Functions: Turning Points 2	(E)
	MI62.09	Differentiating Functions: Problem Solving	(E)
	MI62.10	Differentiating Functions: Kinematics	(E)
	MI62.11	Differentiating Functions: Second Derivative	(E)
	MF26.01	Key Terms in 2D Geometry	
	MF26.02	Key Terms in 3D Geometry	
	MF26.03	Types of Angles 1: Diagrams	
	MF26.04	Types of Angles 2: Numbers	
Introduction to Geometry	MF26.05	Parallel and Perpendicular Lines	
	MF26.06	Naming 2D Shapes	
	MF26.07	Types of Triangles 1: Diagrams	
	MF26.08	Types of Triangles 2: Words	
	MF26.09	Types of Quadrilateral	
	MF26.10	Naming 3D Shapes	
	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)	
	MF26.12	Measuring Angles 2: Angles < 180°	
	MF26.13	Measuring Angles 3: Angles > 180°	

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Introduction to Geometry	MF26.14	Estimating Angles
	MF26.15	Drawing Angles
	MF26.16	Using a Ruler
Angles	MF27.01	Straight Line Angles 1: Multiples of 5°
	MF27.02	Straight Line Angles 2
	MF27.03	Straight Line Angles with Algebra
	MF27.04	Angles Around a Point 1: Multiples of 5°
	MF27.05	Angles Around a Point 2
	MF27.06	Angles Around a Point with Algebra
	MF27.07	Vertically Opposite Angles
	MF27.08	Alternate Angles
	MF27.09	Corresponding Angles
	MF27.10	Co-interior Angles
	MF27.11	Angles in Parallel Lines 1
	MF27.12	Angles in Parallel Lines 2
	MH57.01	Angle in a Semicircle and Angle at Tangent ⓒ
Angles in Polygons	MF28.01	Angles in a Triangle 1
	MF28.02	Angles in a Triangle 2: Isosceles Triangles
	MF28.03	Angles in a Triangle 3: Including Angles on a Straight Line
	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
	MF28.05	Angles in Quadrilaterals
	MF28.06	Introduction to Angles in Polygons
	MF28.07	Interior Angles 1: Sum of Interior Angles

Angles in Polygons	MF28.08	Interior Angles 2: Angles in Regular Shapes
	MF28.09	Interior Angles in Irregular Shapes
	MF28.10	Exterior Angles
	MF28.11	Using Multiple Rules with Angles in Polygons
2D Shapes	MF29.01	Rotational Symmetry
	MF29.02	Reflective Symmetry
	MF29.03	Quadrilateral Facts
	MF29.04	Polygon Facts
	MF29.05	Naming the Parts of a Circle
	MF29.06	Congruence
Perimeter	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
Area	MF31.01	Area by Counting Squares
	MF31.02	Estimating Area
	MF31.03	Area of Squares, Rectangles and Parallelograms
	MF31.04	Area of Right Angled Triangles
	MF31.05	Area of Triangles
	MF31.06	Area of Composite Shapes 1: Adding

Area	MF31.07	Area of Trapeziums
	MF31.08	Area of Composite Shapes 2: Subtracting
	MF31.09	Area and Algebra
Circles	MF32.01	Circumference: From Radius
	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter
	MF32.05	Perimeter of Part Circles
	MF32.06	Perimeter of Composite Shapes with Part Circles
	MF32.07	Area of a Circle: From Radius
	MF32.08	Area of a Circle: From Diameter
	MF32.09	Area of a Circle
	MF32.10	Using the Area of a Circle to find the Radius or Diameter
	MF32.11	Areas of Part Circles
	MF32.12	Areas of Composite Shapes with Part Circles
	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MH32.17	Arc Length 3: Reverse Ⓔ
	MF32.15	Area of a Sector 1
	MH32.18	Area of a Sector 2: Reverse Ⓔ
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving Ⓔ

3D Shapes	MF33.01	Planes of Symmetry
	MF33.02	Nets of Cubes
	MF33.03	Plans and Elevations with Cuboids
	MF33.04	Plans and Elevations
Volume	MF34.01	Counting Cubes
	MF34.02	Volume of Cubes and Cuboids
	MF34.03	Volume of Cubes and Cuboids with Missing Side(s)
	MF34.04	Volume of Prisms 1: Given Area
	MF34.05	Volume of Prisms 2: Triangular Prisms
	MF34.06	Volume of Prisms 3: Mixed Exercise
	MF34.07	Volume of Cylinders
	MF34.08	Volume of Cylinders with a Missing Value
	MF34.09	Volume of Part Cylinders
	MF34.10	Volume of a Sphere
	MF34.11	Volume of a Sphere with the Radius Missing
	MF34.12	Volume of a Cone
	MF34.13	Volume of a Cone with the Radius Missing
	MF34.14	Volume of a Hemisphere
	MF34.15	Volume of Pyramids
	MF34.16	Volume of Composite Solids
	MH34.17	Problem Solving with Volume Ⓔ
	MH34.18	Volume of Frustums Ⓔ

MF35.01	Surface Area of Cuboids	
MF35.02	Surface Area of Prisms	
MF35.03	Surface Area of Cylinders	
MF35.04	Surface Area of Part Cylinders	
MF35.05	Surface Area of Spheres	
MF35.06	Surface Area of Cones	
MF35.07	Surface Area of Pyramids	
MF35.08	Surface Area of Composite Solids	
MH35.09	Problem Solving with Surface Area	Ⓔ

Surface Area

MF36.01	Reading Scales	
MF36.02	Metric Units	
MF36.03	Estimating with Metric Units	
MF36.04	Converting Metric Length (One Step)	
MF36.05	Converting Metric Length (Multi-Step)	
MF36.06	Converting Metric Length: Worded Questions	
MF36.07	Converting Metric Mass (One Step)	
MF36.08	Converting Metric Mass (Multi-Step)	
MF36.09	Converting Metric Mass: Worded Questions	
MF36.10	Converting Metric Capacity	
MF36.11	Converting Metric Volume 1	
MF36.12	Converting Metric Volume 2	
MF36.13	Converting Area 2: Unit Conversions	

Measure

MF36.14	Converting Area 1: Area Model
MF36.15	Converting Volume
MF36.16	Metric and Imperial Length (No Calculator)
MF36.17	Metric and Imperial Length (Calculator)
MF36.18	Metric and Imperial Mass and Volume (No Calculator)
MF36.19	Metric and Imperial Mass and Volume (Calculator)
MF36.20	Conversion Graphs: Drawing
MF36.21	Conversion Graphs: Interpreting
MF36.22	Conversion Graphs: Units of Measure

Measure

MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past
MF37.02	Reading a 12-Hour Clock 2: Multiples of 5
MF37.03	Reading a 12-Hour Clock 3: Mixed
MF37.04	Converting Time: AM and PM
MF37.05	Converting Time: Seconds, Minutes and Hours
MF37.06	Converting Time: Days, Weeks and Years
MF37.07	Calendar Months
MF37.08	Converting Time: Mixed Units
MF37.09	Problems with Time
MF37.10	Converting Currency 1
MF37.11	Converting Currency 2: Double Conversions
MF37.12	Converting Currency: Mixed Problems

Time and Money

	MF40.10	Enlargement with Centre (x,y)	
	MF40.11	Enlargement with Fractional Scale Factor (0,0)	
	MF40.12	Enlargement with Fractional Scale Factor (x,y)	
	MH40.20	Enlargement with Negative Scale Factor	(E)
	MH40.21	Enlargement with Negative Fractional Scale Factor	(E)
	MH40.22	Enlargement with Mixed Scale Factor	(E)
Transformations	MF40.13	Describing Enlargements with an Integer Scale Factor	
	MF40.14	Describing Enlargements with a Non-Integer Scale Factor	
	MH40.23	Describing Enlargements with Mixed Scale Factor	(E)
	MF40.15	Rotation with Centre (0,0)	
	MF40.16	Rotation with Centre (x,y)	
	MF40.17	Describing Rotation	
	MF40.18	Describing Transformations	
	MF40.19	Combination of Transformations 1	
	MH40.24	Combination of Transformations 2	(E)
	MH57.01	Angle in a Semicircle and Angle at Tangent	(E)
	MH57.02	Properties of Diameter and Radii	(E)
	MH57.03	Tangents from an External Point	(E)
Circle Theorems	MH57.04	Angles at the Centre	(E)
	MH57.05	Angles on the Same Arc	(E)
	MH57.06	Angles at the Centre and on the Same Arc	(E)
	MH57.07	Cyclic Quadrilaterals	(E)

	MH57.08	Alternate Segment Theorem	(E)
	MI57.13	Intersecting Chord Theorem	(E)
	MI57.14	Intersecting Secant Theorem	(E)
Circle Theorems	MH57.09	Mixed Circle Theorems 1: Practice	(E)
	MH57.10	Mixed Circle Theorems 2: Algebra	(E)
	MH57.11	Mixed Circle Theorems 3: Two Theorems	(E)
	MH57.12	Mixed Circle Theorems 4: Challenge	(E)
	MI57.15	Mixed Circle Theorems 5: Including Chord and Secant Theorems	(E)
	MI57.16	Mixed Circle Theorems 6: Challenge incl. Chord and Secant Theorems	(E)
	MF41.01	Column Vectors	
	MF41.02	Column Vectors: Scalar Multiplication	(E)
	MF41.03	Column Vectors: Addition and Subtraction	(E)
	MF41.04	Column Vectors: Drawing	
	MI41.14	Magnitude of Vectors	(E)
Vectors	MF41.05	Geometric Vectors 1: One Term	
	MF41.06	Geometric Vectors 2: Two Terms	
	MH41.07	Geometric Vectors 3: Within Shapes	(E)
	MH41.08	Geometric Vectors 4: Expand and Simplify	(E)
	MH41.09	Geometric Vectors 5: Midpoints	(E)
	MH41.10	Geometric Vectors 6: Ratios	(E)
	MH41.11	Geometric Vectors 7: Fractions and Ratios	(E)

Vectors	MH41.12	Geometric Vectors 8: Parallel Vectors	(E)
	MH41.13	Geometric Vectors 9: Proof	(E)
Construction and Loci	MF42.01	Constructing Circles	
	MF42.02	Constructing an Equilateral Triangle	
	MI42.10	Constructing Triangles	
	MF42.03	Perpendicular Bisector	
	MF42.04	Angle Bisector	
	MF42.05	Perpendicular from a Point to a Line	
	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)	
	MF42.07	Understanding Loci	
	MF42.08	Loci 1: Single Constructions	
	MF42.09	Loci 2: Multi-Step Problems	
Similarity	MF43.01	Introduction to Similarity	
	MF43.02	Similar Polygons: Finding the Scale Factor	
	MF43.03	Similar Polygons: Missing Sides given Scale Factor	
	MF43.04	Similar Polygons: Missing Sides	
	MF43.05	Similar Triangles 1: Same Orientation	
	MF43.06	Similar Triangles 2: Different Orientations	
	MH43.07	Similar Area 1	(E)
	MH43.08	Similar Area 2: Including Ratio	(E)
	MH43.09	Similar Volume	(E)
	MH43.10	Similar Area and Volume	(E)

Pythagoras	MF44.01	Pythagoras' Theorem	
	MF44.02	Pythagoras: Finding the Hypotenuse	
	MF44.03	Pythagoras: Finding a Short Side	
	MF44.04	Pythagoras: Mixed Sides	
	MF44.05	Pythagoras: Using Coordinates	
	MF44.06	Pythagoras: Worded Questions	
	MF44.07	Pythagoras: Applied Questions	
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA	
	MF45.02	Trigonometry: Using a Calculator	
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)	
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)	
	MF45.05	Trigonometry: Missing Angle	
	MF45.06	Trigonometry: Worded Questions	
	MF45.07	Exact Trigonometric Values	
	MF45.08	Trigonometry and Pythagoras	
	MI45.09	Shortest Distance	(E)
	MI45.10	Simple Trigonometric Equations	(E)
Advanced Trigonometry	MH58.01	Area using 1/2(ab)sin(C): Proof	(E)
	MH58.02	1/2(ab)sin(C): Finding the area	(E)
	MH58.03	1/2(ab)sin(C): Area with Missing Value	(E)
	MH58.04	1/2(ab)sin(C): Applied	(E)
	MH58.05	Sine Rule: Proof	(E)

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	MH58.06	Sine Rule: Sides	(E)
	MH58.07	Sine Rule: Angles	(E)
	MH58.08	Sine Rule: Applied	(E)
	MH58.09	Cosine Rule: Proof	(E)
	MH58.10	Cosine Rule: Finding a	(E)
Advanced Trigonometry	MH58.11	Cosine Rule: Finding A	(E)
	MH58.12	Cosine Rule: Applied	(E)
	MH58.13	Choosing the Correct Trigonometric Rule	(E)
	MH58.14	Mixed Trigonometry 1	(E)
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems	(E)
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems	(E)
	MH58.17	Mixed Trigonometry 4: Non-Calculator	(E)
	MH58.18	Mixed Trigonometry 5: Bearings	(E)
	MH59.01	3D Pythagoras 1: Cuboids	(E)
3D Trigonometry	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	(E)
	MH59.03	3D SOH CAH TOA	(E)
	MH59.04	3D Trigonometry	(E)
	MH59.05	3D Trigonometry: Problem Solving	(E)
	MF46.01	Probability Scale in Words	
Probability	MF46.02	Probability Scale in Numbers	
	MF46.03	Calculating Probability	
	MF46.04	Mutually Exclusive Events	

	MF46.05	Two Way Tables: Probability	
	MF46.06	Listing Outcomes	
	MH46.18	Product Rule for Counting	(E)
	MF46.07	Sample Spaces	
	MF46.08	Relative Frequency	
	MF46.09	Expected Frequency	
	MF46.10	Frequency Trees	
	MF46.11	Interpreting Frequency Trees	
	MF46.12	Multiplication Law of Probability (AND)	
	MF46.13	Addition Law of Probability (OR)	
Probability	MH46.19	Addition Law of Probability (General OR)	(E)
	MF46.14	Tree Diagrams 1: Completing Diagrams	
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome	
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes	
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)	
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)	(E)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)	
	MH46.22	Tree Diagrams 7: NOT Statements	(E)
	MH46.23	Tree Diagrams 8: Reverse	(E)
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)	(E)
	MH46.25	Tree Diagrams 10: Conditional Probability (Multiple Outcomes)	(E)

Probability	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)	(E)
	MH46.27	Tree Diagrams 12: Algebraic Expressions	(E)
	MH46.28	Tree Diagrams 13: Solving Equations	(E)
Sets and Venn Diagrams	MF47.01	Set Notation	
	MI47.21	Rational and Irrational Numbers	
	MF47.02	Elements in a Set 1: Identifying Elements	
	MF47.03	Elements in a Set 2: Unions and Intersections	
	MF47.04	Elements in a Set 3: Complements	
	MI47.25	Subsets: Introduction	(E)
	MI47.24	Subsets: Problem Solving	(E)
	MF47.05	Introduction to Venn Diagrams	
	MF47.06	Constructing Venn Diagrams 1: Listing Elements	
	MF47.07	Constructing Venn Diagrams 2: Writing Values	
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams	(E)
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams	
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)	(E)
	MH47.14	Venn Diagrams: Complements	(E)
	MH47.15	Venn Diagrams with Algebra	(E)
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams	
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)	

Sets and Venn Diagrams	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	(E)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)	(E)
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)	(E)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)	
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)	(E)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	(E)
Collecting Data	MF48.01	Hypotheses, Primary Data and Secondary Data	
	MF48.02	Discrete and Continuous Data	
	MF48.03	Tally Chart	
	MF48.04	Questionnaires	
	MF48.05	Types of Random Sampling	
	MF48.06	Fair Samples	
	MF48.07	Grouped Tally Charts: Discrete and Continuous	
Analysing Data	MF49.01	Mode	
	MF49.02	Median	
	MF49.03	Mean 1: Positive Integers	
	MF49.04	Mean 2: Decimals and Negatives	
	MF49.05	Mean 3: Finding Missing Values	
	MF49.06	Mean 4: Changing Means	
	MF49.07	Range 1: Positive Integers	

Analysing Data	MF49.08	Range 2: Decimals and Negatives	
	MF49.09	Applying Averages and the Range 1: Raw Data	
	MF49.10	Mode from Frequency Table	
	MF49.11	Median from Frequency Table	
	MF49.12	Mean from Frequency Table	
	MF49.13	Range from Frequency Table	
	MF49.14	Modal Class from Grouped Frequency Table	Ⓔ
	MF49.15	Median from Grouped Frequency Table	Ⓔ
	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data	Ⓔ
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data	Ⓔ
	MF49.18	Range from Grouped Frequency Table	Ⓔ
	MF49.19	Applying Averages and the Range 2: Tables	Ⓔ
	MF49.20	Using Averages and Range	
	MF49.21	Using Averages and Range: Comparing Two Data Sets	
Displaying Data	MF50.01	Completing Two Way Tables	
	MF50.02	Interpreting Two Way Tables	
	MF50.03	Pictograms	
	MF50.04	Bar Charts	
	MF50.05	Multiple and Composite Bar Charts	
	MF50.06	Vertical Line Graphs	
	MF50.07	Creating Stem and Leaf Diagrams	

Displaying Data	MF50.08	Interpreting Stem and Leaf Diagrams	
	MF50.09	Creating Pie Charts (No Calculator)	
	MF50.10	Creating Pie Charts (Calculator)	
	MF50.11	Interpreting Pie Charts	
	MF50.12	Time Series Graphs	
	MF50.13	Drawing Scatter Graphs	
	MF50.14	Interpreting Scatter Graphs 1: Introduction	
	MF50.15	Interpreting Scatter Graphs 2: Outliers	
	MF50.16	Frequency Polygons: Drawing	
	MF50.17	Frequency Polygons: Interpreting	
	MF50.18	Interpreting Misleading Data Representations	
	MH61.01	Frequency Density 1: Calculating	Ⓒ
	MH61.03	Histograms 1: Choosing Axes	Ⓒ
	MH61.04	Histograms 2: Plotting	Ⓒ
Cumulative Frequency	MH60.01	Cumulative Frequency 1: Calculating	Ⓔ
	MH60.02	Cumulative Frequency 2: Drawing	Ⓔ
	MH60.03	Cumulative Frequency 3: Calculating Frequency	Ⓔ
	MH60.04	Cumulative Frequency 4: Finding Values	Ⓔ
	MH60.05	Cumulative Frequency 5: Median	Ⓔ
	MH60.06	Cumulative Frequency 6: Quartiles	Ⓔ
	MH60.07	Cumulative Frequency 7: Interquartile Range	Ⓔ
	MH60.08	Cumulative Frequency 8: Plot and Evaluate	Ⓔ
	MI60.15	Cumulative Frequency 9: Percentiles	Ⓔ

	MH61.01	Frequency Density 1: Calculating	Ⓔ
	MH61.02	Frequency Density 2: Problem Solving	Ⓔ
	MH61.03	Histograms 1: Choosing Axes	Ⓔ
	MH61.04	Histograms 2: Plotting	Ⓔ
	MH61.05	Histograms 3: Calculating Frequency	Ⓔ
Histograms	MH61.06	Histograms 4: Calculating Frequency within a Given Range	Ⓔ
	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)	Ⓔ
	MH61.08	Histograms 6: Finding Fractions and Percentages	Ⓔ
	MH61.09	Histograms 7: Finding Proportions	Ⓔ
	MH61.10	Histograms 8: Median	Ⓔ
	MH61.11	Histograms 9: Mean	Ⓔ
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)	Ⓔ

Course Content
Mathematics –
Bridge to A-Level

Diagnostics 10   **Strands** 36   **Nuggets** 433

This is an advanced mathematics course covering all key GCSE concepts and transition material to bridge the gap between KS4 and KS5. Suitable for students who are preparing to tackle A-level mathematics.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	10
Rounding	1
Percentages Calculator	6
Powers and Roots	6
Surds	16
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Expanding and Factorising	17
Solving Linear Equations	14
Solving Quadratic Equations	14

Completing the Square	9
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Advanced Trigonometry	18
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Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	BR0.01	Diagnostic 1: Essentials
	BR0.02	Diagnostic 2: Essentials
	BR0.03	Diagnostic 3
	BR0.04	Diagnostic 4
	BR0.05	Diagnostic 5: Physics for Mechanics
	BR0.06	Diagnostic 6
	BR0.07	Diagnostic 7
	BR0.08	Diagnostic 8
	BR0.09	Diagnostic 9
	BR0.10	Diagnostic 10
Rounding	MF9.15	Bounds 3: Intervals
Percentages Calculator	MF11.07	Compound Interest (Calculator)
	MF11.08	Depreciation (Calculator)
	MF11.09	Compound Interest and Depreciation (Calculator)

Strand	Code	Nugget Name
Percentages Calculator	MH11.14	Exponential Growth
	MH11.15	Exponential Decay
	MH11.16	Exponential Growth and Decay
Powers and Roots	MF12.01	Squares
	MF12.02	Cubes
	MF12.03	Squaring and Cubing Negatives
	MF12.04	Powers
	MF12.05	Roots of Squares and Cubes
	MF12.06	Roots
Surds	MH52.01	Surds: Introduction
	MH52.02	Surds: Multiplication and Division
	MH52.03	Surds: Simplifying 1
	MH52.04	Surds: Simplifying 2 (Products of Surds)
	MH52.05	Surds: Simplifying 3 (Dividing Surds)
	MH52.06	Surds: Simplifying 4 (Sum and Difference)
	MH52.07	Surds: Expanding 1 (Single Bracket)
	MH52.08	Surds: Expanding 2 (Sum/Difference of Single Brackets)
	MH52.09	Surds: Expanding 3 (Double Brackets)
	MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)
	MH52.11	Surds: Expanding 5 (Difference of Two Squares)
	MH52.12	Surds: Rationalising 1 (Monomial Denominator)
	MH52.13	Surds: Rationalising 2 (Binomial Denominator)

Surds	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)
	MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)
	MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)
	MF13.01	Powers of 0 and 1
	MF13.02	Raising a Fraction to a Power
	MF13.03	Multiplying Indices
	MF13.04	Dividing Indices
	MF13.05	Power of a Power
	MF13.06	Negative Indices
	MF13.07	Combination of Indices
	MH13.08	Fractional Indices 1: Square and Cube Root
	MH13.09	Fractional Indices 2: Non-Unit Fraction
Indices	MH13.10	Fractional Indices 3: Negative Unit Fractions
	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions
	MH13.12	Fractional Indices 5: Fraction Base
	MH13.14	Solving Problems with Indices 1: Combination of Rules
	MH13.15	Solving Problems with Indices 2: Combination of Rules
	MH13.16	Solving Problems with Indices 3: Working Backwards
	MH13.17	Solving Problems with Indices 4: Solving Equations
	MH13.18	Solving Problems with Indices 5: Including Square/Cube Root Form
	MH13.19	Solving Problems with Indices 6: Challenge
	MH13.20	Solving Problems with Indices 7: Challenge

Indices	MH13.21	Exponential Equations 1: Introduction
	MH13.22	Exponential Equations 2: Quadratics (Changing One Base)
	MH13.23	Exponential Equations 3: Quadratics (Changing Multiple Bases)
	MH13.24	Exponential Equations 4: Challenge
	MF17.07	Simplifying Expressions 1: Multiplication
	MF17.08	Simplifying Expressions 2: Multiplication (In Context)
Introduction to Algebra	MF17.09	Simplifying Expressions 3: Division
	MF17.10	Simplifying Expressions 4: Division
	MF17.11	Simplifying Expressions 5: Multiplication and Division
	MH17.17	Simplifying Expressions 6: Index Laws
	MH17.18	Simplifying Expressions 7: Index Laws
	MF18.05	Expanding Single Brackets 5: Mixed
	MF18.06	Expanding and Simplifying
	MF18.10	Expanding Double Brackets 1: $(x \pm a)(x \pm b)$
	MF18.11	Expanding Double Brackets 2: $(ax \pm b)(cx \pm d)$
Expanding and Factorising	MF18.12	Expanding Double Brackets 3: $(x \pm a)^2$
	MF18.13	Expanding Double Brackets 4: $a(bx \pm c)(dx \pm e)$
	MF18.14	Expanding Double Brackets 5: $a(bx \pm c)^2$
	MH18.18	Expanding Double Brackets 6: $(ax \pm b)(cy \pm d)$
	MH18.19	Expanding More Brackets
	MF18.15	Factorising Quadratics 1: $(x + a)(x + b)$
	MF18.16	Factorising Quadratics 2: $(x \pm a)(x \pm b)$

Expanding and Factorising

MH18.20	Factorising Quadratics 3: $(ax \pm b)(x \pm c)$
MH18.21	Factorising Quadratics 4: $(ax \pm b)(x \pm c)$
MH18.22	Factorising Quadratics 5: $(ax \pm b)(x \pm c)$
MH18.23	Factorising Quadratics 6: $(ax \pm b)(cx \pm d)$
MH18.24	Factorising Quadratics 7: $(ax \pm b)(cx \pm d)$
MF18.17	The Difference of Two Squares

Solving Linear Equations

MF19.13	Solving Equations: Three Steps (Unknown on One Side)
MF19.14	Solving Equations: Three Steps (Including Brackets)
MF19.15	Solving Equations: Three Steps (Unknown on Both Sides)
MF19.16	Solving Equations: Four Steps (Including Expanding)
MF19.17	Solving Equations: Four Steps (Including Fractions)
MF19.20	Simultaneous Equations: Introduction
MF19.21	Simultaneous Equations 1
MF19.22	Simultaneous Equations 2: Scale One Equation
MF19.23	Simultaneous Equations 3: Scale Both Equations
MF19.24	Simultaneous Equations 4: Rearranging
MF19.25	Simultaneous Equations: Substitution
MH19.27	Iteration 1: Find Solution Between
MH19.28	Iteration 2: Rearrange Iterative Formula
MH19.29	Iteration 3: Recursive Iteration

Solving Quadratic Equations

MF20.01	Solving Quadratics 1: $x^2 + b = 0$
MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$
MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$

Solving Quadratic Equations

MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)
MH20.05	The Discriminant
MH20.06	Quadratic Formula 1: Identify A, B and C
MH20.07	Quadratic Formula 2: Applying the Formula
MH20.08	Quadratic Formula 3: Applying the Formula
MH20.09	Quadratic Formula 4: Give Answer in Form $(p \pm \sqrt{q})/r$
MH20.10	Quadratic Formula 5: In Context
MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)
MH20.12	Solving Quadratics 6: $ax^2 + bx + c = 0$ (a is Not Prime)
MH20.13	Solving Quadratics 7: Challenge
MH20.14	Quadratic Simultaneous Equations

Completing the Square

MH53.01	Completing the Square 1: $(x + q)^2 + r$
MH53.02	Completing the Square 2: $(x + q/2)^2 + r$
MH53.03	Completing the Square 3: $p(x + q)^2 + r$
MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$
MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$
MH53.06	Completing the Square to Solve Equations 2: $x^2 + bx + c$ (Including Fractions)
MH53.07	Completing the Square to Solve Equations 3: $ax^2 + bx + c$
MH53.08	Completing the Square to Solve Equations 4: Mixed Exercise
MH53.09	Completing the Square: Turning Points

Algebraic Fractions

MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)
MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)
MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)

Algebraic Fractions	MH54.04	Algebraic Fractions 4: Simplify (Binomial Factors)
	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)
	MH54.06	Algebraic Fractions 6: Add and Subtract (Monomial as Denominator)
	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)
	MH54.08	Algebraic Fractions 8: Multiply
	MH54.09	Algebraic Fractions 9: Multiply
	MH54.10	Algebraic Fractions 10: Factorise then Multiply
	MH54.11	Algebraic Fractions 11: Divide
	MH54.12	Algebraic Fractions 12: Solve
	MH54.13	Algebraic Fractions 13: Problem Solving
Formulae	MF21.03	Using Kinematics
	MF21.04	Recalling and Using Formulae 1
	MH21.11	Recalling and Using Formulae 2
	MF21.05	Rearranging Formulae: One Step
	MF21.06	Rearranging Formulae: Two Step
	MF21.07	Rearranging Formulae: Negative Subject
	MF21.08	Rearranging Formulae: Unknown in Denominator
	MF21.09	Rearranging Formulae: With Powers
	MF21.10	Rearranging Formulae: Unknown on Both Sides
Algebraic Proof	MH55.01	Introduction to Algebraic Proof
	MH55.02	Algebraic Proof 1: Complete the Proof
	MH55.03	Algebraic Proof 2
	MH55.04	Algebraic Proof: Disproving by Example

Functions	MH56.01	Functions: Key Concept
	MI56.18	Functions: Domain
	MI56.19	Functions: Range
	MH56.02	Functions: Substitution 1 (Linear Functions)
	MH56.03	Functions: Substitution 2 (Quadratic Functions)
	MH56.04	Functions: Substitution 3 (Challenge)
	MH56.05	Functions: Solving
	MH56.06	Functions: Algebraic
	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)
	MH56.08	Composite Functions: Substitution 2 (2 Non-Linear Functions)
	MH56.09	Composite Functions: Substitution 3 (3 Functions)
	MH56.10	Composite Functions: Substitution 4 (Quadratic Functions)
	MH56.11	Composite Functions: Solving
	MH56.12	Composite Functions: Algebraic
	MH56.13	Inverse Functions 1: Linear
	MH56.14	Inverse Functions 2: Non-Linear
	MH56.15	Inverse Functions: Substitution
	MH56.16	Inverse Functions: Solving
	MH56.17	Composite and Inverse Functions
Sequences	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
	MI22.20	Sequences: $a + (n - 1)d$
	MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)

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Sequences	MF22.08	Linear Sequences: Finding the nth Term 2 (Decreasing)
	MI22.21	Sum of Arithmetic Sequences 1
	MI22.22	Sum of Arithmetic Sequences 2: Reverse
	MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
	MF22.11	Important Sequences: Geometric
	MF22.13	Quadratic Sequences: Using the nth Term
	MH22.14	Subscript Notation
	MH22.15	Unusual Sequences
	MH22.16	Quadratic Sequences 1: $n^2 + c$
	MH22.17	Quadratic Sequences 2: $an^2 + c$
	MH22.18	Quadratic Sequences 3: $an^2 + bn + c$
	MH22.19	Quadratic Sequences 4: $an^2 + bn + c$ and $(an + b)^2$
Straight Line Graphs	MH23.20	Coordinates and Ratios
	MF23.04	Horizontal and Vertical Graphs
	MF23.05	Other Important Linear Graphs
	MF23.06	Plotting Straight Line Graphs: 1st Quadrant
	MF23.07	Plotting Straight Line Graphs: 4 Quadrants
	MF23.08	Finding the Gradient of a Line Segment: Using the Graph
	MF23.09	Finding the Gradient of a Line Segment: Using the Formula
	MF23.10	Understanding $y = mx + c$
	MF23.11	Graphing $y = mx + c$ (1)
	MF23.12	Graphing $y = mx + c$ (2)

Straight Line Graphs	MF23.13	Finding $y = mx + c$ from a Gradient and a Point
	MF23.14	Finding $y = mx + c$ from Two Points
	MF23.15	Rearranging $y = mx + c$
	MF23.16	Finding Parallel Lines
	MH23.21	Finding Perpendicular Lines 1: Gradient
	MH23.22	Finding Perpendicular Lines 2: Equation
	MH23.23	Finding Perpendicular Lines 3: Problem Solving
	MH23.24	Equation of a Tangent 1: Circle Given
	MH23.25	Equation of a Tangent 2: Mixed Exercise
	MF23.17	Solving Using Straight Line Graphs
	MF23.18	Solving Simultaneous Equations Using Straight Line Graphs 1: Graphs Given
	MF23.19	Solving Simultaneous Equations Using Straight Line Graphs 2: Graphs Not Given
Quadratic and Other Graphs	MF24.01	Plotting Simple Quadratic Graphs 1: $y = ax^2 + c$
	MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$
	MF24.03	Quadratic Graphs: Finding the y-intercept
	MF24.04	Quadratic Graphs: Finding the Line of Symmetry
	MF24.05	Quadratic Graphs: Finding the Turning Point
	MF24.06	Quadratic Graphs: Finding the Roots
	MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given
	MH24.14	Quadratic Graphs: Turning Point from Completing Square 2: $y = (x + q)^2 + r$ Not Given
	MH24.15	Quadratic Graphs: Turning Point from Completing Square 3: $y = \pm p(x + q)^2 + r$ Not Given

Quadratic and Other Graphs	MH24.16	Estimating Gradients
	MH24.17	Exponential Functions
	MH24.18	Trigonometric Functions: Sin Graph
	MH24.19	Trigonometric Functions: Cos Graph
	MH24.20	Trigonometric Functions: Tan Graph
	MH24.37	Trigonometric Functions: Mixed
	MH24.22	Equations of Circles
	MF24.07	Plotting Other Polynomial Graphs
	MF24.08	Plotting Reciprocal Graphs
	MH24.23	Plotting Exponential Graphs
	MF24.09	Recognising Key Graphs
	MF24.10	Approximate Solutions Using a Graph
	MH24.24	Transforming Graphs: Translating Vertical
	MH24.25	Transforming Graphs: Translating Horizontal
	MH24.26	Transforming Graphs: Reflections
	MH24.27	Transforming Graphs: Stretching y-direction
	MH24.28	Transforming Graphs: Stretching x-direction
	MH24.29	Transforming Graphs: Mixed Translations
	MH24.30	Transforming Graphs: Mixed Stretches
	MH24.31	Transforming Graphs: Mixed
	MH24.21	Transforming Graphs: Mixed (Trig Functions)
	MH24.32	Transforming Graphs: Combined 1
	MH24.33	Transforming Graphs: Combined 2

Quadratic and Other Graphs	MH24.34	Areas under Graphs
	MH24.35	Quadratic Simultaneous Equations Graphically
	MH24.36	Polynomial Simultaneous Equations Graphically
Inequalities	MH25.13	Solving Quadratic Inequalities Graphically
	MF25.08	Solving Inequalities: Two Step
	MF25.09	Solving Inequalities: One Step and Two Sided
	MF25.10	Solving Inequalities: Multi Step and Two Sided
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides
	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line
	MH25.14	Solving Inequalities: Quadratics 1
	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)
	MH25.16	Solving Inequalities: Quadratics 3 (Factorising)
	MH25.17	Solving Multiple Linear Inequalities
	MH25.18	Regions 1: One Vertical/Horizontal Line
	MH25.19	Regions 2: One Line of Form y = mx + c
	MH25.20	Regions 3: Multiple Vertical/Horizontal Lines
	MH25.21	Regions 4: Multiple Lines of Form y = mx + c
	MI25.22	Linear Programming 1: Constructing Inequalities
	MI25.23	Linear Programming 2: Shading and Interpreting
Circles	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MH32.17	Arc Length 3: Reverse

Circles	MF32.15	Area of a Sector 1
	MH32.18	Area of a Sector 2: Reverse
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving
Compound Measure	MF38.07	Speed, Distance and Time: Mixed Questions
	MF38.08	Converting Units with Speed, Distance and Time
	MF38.19	Distance-Time Graphs: Drawing
	MF38.20	Distance-Time Graphs: Interpreting
	MF38.21	Distance-Time Graphs: Speed
	MH38.22	Velocity-Time Graph: Interpreting
	MH38.23	Velocity-Time Graph: Distance
	MH38.24	Velocity-Time Graph: Acceleration
	MH38.25	Velocity-Time Graph: Problem Solving
Scale Drawings and Bearings	MF39.06	Introduction to Bearings
	MF39.07	Bearings from North
	MF39.08	Finding Bearings 1
	MF39.09	Finding Bearings 2: Using Co-interior Angles
Circle Theorems	MH57.01	Angle in a Semicircle and Angle at Tangent
	MH57.02	Properties of Diameter and Radii
	MH57.03	Tangents from an External Point
	MH57.04	Angles at the Centre
	MH57.05	Angles on the Same Arc

Circle Theorems	MH57.06	Angles at the Centre and on the Same Arc
	MH57.07	Cyclic Quadrilaterals
	MH57.08	Alternate Segment Theorem
	MI57.13	Intersecting Chord Theorem
	MI57.14	Intersecting Secant Theorem
	MH57.09	Mixed Circle Theorems 1: Practice
	MH57.10	Mixed Circle Theorems 2: Algebra
	MH57.11	Mixed Circle Theorems 3: Two Theorems
	MH57.12	Mixed Circle Theorems 4: Challenge
	MI57.15	Mixed Circle Theorems 5: Including Chord and Secant Theorems
	MI57.16	Mixed Circle Theorems 6: Challenge incl. Chord and Secant Theorems
Vectors	MF41.01	Column Vectors
	MF41.02	Column Vectors: Scalar Multiplication
	MF41.03	Column Vectors: Addition and Subtraction
	MF41.04	Column Vectors: Drawing
	MI41.14	Magnitude of Vectors
	MF41.05	Geometric Vectors 1: One Term
	MF41.06	Geometric Vectors 2: Two Terms
	MH41.07	Geometric Vectors 3: Within Shapes
	MH41.08	Geometric Vectors 4: Expand and Simplify
	MH41.09	Geometric Vectors 5: Midpoints
	MH41.10	Geometric Vectors 6: Ratios

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Vectors	MH41.11	Geometric Vectors 7: Fractions and Ratios
	MH41.12	Geometric Vectors 8: Parallel Vectors
	MH41.13	Geometric Vectors 9: Proof
Pythagoras	MF44.01	Pythagoras' Theorem
	MF44.02	Pythagoras: Finding the Hypotenuse
	MF44.03	Pythagoras: Finding a Short Side
	MF44.04	Pythagoras: Mixed Sides
	MF44.05	Pythagoras: Using Coordinates
	MF44.06	Pythagoras: Worded Questions
	MF44.07	Pythagoras: Applied Questions
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA
	MF45.02	Trigonometry: Using a Calculator
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)
	MF45.05	Trigonometry: Missing Angle
	MF45.06	Trigonometry: Worded Questions
	MF45.07	Exact Trigonometric Values
	MF45.08	Trigonometry and Pythagoras
	MI45.09	Shortest Distance
	MI45.10	Simple Trigonometric Equations
Advanced Trigonometry	MH58.01	Area using ½ (ab) sin (C): Proof
	MH58.02	½ (ab) sin (C): Finding the area

Advanced Trigonometry	MH58.03	½ (ab) sin (C): Area with Missing Value
	MH58.04	½ (ab) sin (C): Applied
	MH58.05	Sine Rule: Proof
	MH58.06	Sine Rule: Sides
	MH58.07	Sine Rule: Angles
	MH58.08	Sine Rule: Applied
	MH58.09	Cosine Rule: Proof
	MH58.10	Cosine Rule: Finding a
	MH58.11	Cosine Rule: Finding A
	MH58.12	Cosine Rule: Applied
	MH58.13	Choosing the Correct Trigonometric Rule
	MH58.14	Mixed Trigonometry 1
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems
	MH58.17	Mixed Trigonometry 4: Non-Calculator
	MH58.18	Mixed Trigonometry 5: Bearings
3D Trigonometry	MH59.01	3D Pythagoras 1: Cuboids
	MH59.02	3D Pythagoras 2: Pyramids and Cylinders
	MH59.03	3D SOH CAH TOA
	MH59.04	3D Trigonometry
	MH59.05	3D Trigonometry: Problem Solving

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Probability	MF46.04	Mutually Exclusive Events
	MF46.12	Multiplication Law of Probability (AND)
	MF46.13	Addition Law of Probability (OR)
	MH46.19	Addition Law of Probability (General OR)
	MF46.14	Tree Diagrams 1: Completing Diagrams
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)
	MH46.22	Tree Diagrams 7: NOT Statements
	MH46.23	Tree Diagrams 8: Reverse
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)
	MH46.25	Tree Diagrams 10: Conditional Probability (Multiple Outcomes)
	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)
	MH46.27	Tree Diagrams 12: Algebraic Expressions
	MH46.28	Tree Diagrams 13: Solving Equations
Sets and Venn Diagrams	MF47.01	Set Notation
	MF47.02	Elements in a Set 1: Identifying Elements
	MF47.03	Elements in a Set 2: Unions and Intersections
	MF47.04	Elements in a Set 3: Complements
	MI47.25	Subsets: Introduction

Sets and Venn Diagrams	MI47.23	Subsets: Proper Subsets
	MI47.24	Subsets: Problem Solving
	MF47.05	Introduction to Venn Diagrams
	MF47.06	Constructing Venn Diagrams 1: Listing Elements
	MF47.07	Constructing Venn Diagrams 2: Writing Values
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)
	MH47.14	Venn Diagrams: Complements
	MH47.15	Venn Diagrams with Algebra
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)
	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams From Set Notation)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)
Collecting Data	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples

Analysing Data	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data
Cumulative Frequency and Box Plots	MH60.01	Cumulative Frequency 1: Calculating
	MH60.02	Cumulative Frequency 2: Drawing
	MH60.03	Cumulative Frequency 3: Calculating Frequency
	MH60.04	Cumulative Frequency 4: Finding Values
	MH60.05	Cumulative Frequency 5: Median
	MH60.06	Cumulative Frequency 6: Quartiles
	MH60.07	Cumulative Frequency 7: Interquartile Range
	MH60.08	Cumulative Frequency 8: Plot and Evaluate
	MI60.15	Cumulative Frequency 9: Percentiles
	MH60.09	Box Plots 1: Interpret
	MH60.10	Box Plots 2: Finding Values to Plot
	MH60.11	Box Plots 3: Draw from List
	MH60.12	Box Plots 4: Draw from Data
	MH60.13	Box Plots 5: Evaluate and Compare
	MH60.14	Cumulative Frequency and Box Plots
Histograms	MH61.01	Frequency Density 1: Calculating
	MH61.02	Frequency Density 2: Problem Solving
	MH61.03	Histograms 1: Choosing Axes
	MH61.04	Histograms 2: Plotting
	MH61.05	Histograms 3: Calculating Frequency

Histograms	MH61.06	Histograms 4: Calculating Frequency within a Given Range
	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)
	MH61.08	Histograms 6: Finding Fractions and Percentages
	MH61.09	Histograms 7: Finding Proportions
	MH61.10	Histograms 8: Median
	MH61.11	Histograms 9: Mean
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)
Physics for Maths	PHH3.01	Forces Between Objects: Forces, Vectors and Scalars
	PHH3.02	Weight, Mass and Gravitational Field Strength
	PHH3.03	Resultant Forces & Free Body Diagrams
	PHH3.08	Moments and Equilibrium
	PHH3.09	Moments: Levers
	PHH4.01	Speed and Velocity
	PHH4.02	Acceleration and Deceleration
	PHH4.03	Motion Graphs: Distance-Time Graphs
	PHH4.04	Motion Graphs: Velocity-Time Graphs
	PHH4.05	Motion Graphs: Enclosed Areas and Tangents
	PHH4.07	Forces Between Objects: Newton's Third Law
	PHH4.08	Forces & Motion: Newton's Second Law and Inertial Mass
	PHH4.09	Forces & Motion: Momentum & Collisions
Calculus	MI62.01	Differentiating Functions 1: Single Term
	MI62.02	Differentiating Functions 2: Multiple Terms

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Calculus

MI62.03	Differentiating Functions 3: Negative Powers	
MI62.04	Differentiating Functions 4: Involving Expanding	
MI62.05	Differentiating Functions: Gradient at a Point 1	
MI62.06	Differentiating Functions: Gradient at a Point 2	
MI62.07	Differentiating Functions: Turning Points 1	
MI62.08	Differentiating Functions: Turning Points 2	
MI62.09	Differentiating Functions: Problem Solving	
MI62.10	Differentiating Functions: Kinematics	
MI62.11	Differentiating Functions: Second Derivative	

Course Content
Primary Mathematics – Grade 1

Diagnostics 9   **Strands** 10   **Nuggets** 87

This course is recommended for grade 1 (age 6-7) and is aligned with the PYP mathematics scope and sequence.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	9
Number and Place Value	11
Addition and Subtraction	18
Multiplication and Division	13
Fractions	4
Measurement	9
Money	6
Time	6
Geometry	6
Statistics	5

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	PM0.50	Diagnostic: Number and Place Value
	PM0.51	Diagnostic: Addition and Subtraction
	PM0.52	Diagnostic: Multiplication and Division
	PM0.53	Diagnostic: Fractions
	PM0.54	Diagnostic: Measurement
	PM0.55	Diagnostic: Money
	PM0.56	Diagnostic: Time
	PM0.57	Diagnostic: Geometry
	PM0.58	Diagnostic: Statistics
Number and Place Value	PM10.15	2-Digit: Comparing Numbers with Greater Than and Less Than Symbols <>
	PM10.16	Reading and Writing Numbers to 20
	PM10.17	Reading and Writing Numbers to 100
	PM10.01	Counting in Multiples of 2
	PM10.02	Counting in Multiples of 3
	PM10.03	Counting in Multiples of 5
	PM10.04	Counting in Multiples of 10
	PM1.34	2-Digit: Recognising Place Value
	PM1.35	2-Digit: Representing Numbers

Strand	Code	Nugget Name
Number and Place Value	PM1.36	Number Lines to 100
	PM10.18	Number and Place Value Checkpoint
Addition and Subtraction	PM10.11	Single Digit Addition
	PM10.13	Single Digit Subtraction
	PM2.42	Commutativity in Addition
	PM2.30	Number Bonds to 20
	PM2.31	Number Bonds to 100
	PM2.32	Adding Three 1-Digit Numbers
	PM2.41	Addition and Subtraction Fact Families
	PM2.33	2-Digit: Adding and Subtracting 1s (Not Crossing 10)
	PM1.38	2-Digit: Finding 10 More or 10 Less
	PM2.35	2-Digit: Adding 1 Digit Numbers (Crossing 10)
	PM2.36	2-Digit: Subtracting 1 Digit Numbers (Crossing 10)
	PM2.34	2-Digit: Adding and Subtracting Multiples of 10
	PM2.37	2-Digit: Adding 2 Digit Numbers (No Exchanging)
	PM2.38	2-Digit: Subtracting 2 Digit Numbers (No Exchanging)
	PM2.39	2-Digit: Adding 2 Digit Numbers (With Exchanging)
	PM2.40	2-Digit: Subtracting 2 Digit Numbers (With Exchanging)
	PM2.43	2-Digit: Solving Missing Number Problems Using Fact Families
	PM2.44	Addition and Subtraction Checkpoint

Strand	Code	Nugget Name
Multiplication and Division	PM3.62	Odd and Even Numbers
	PM3.63	Understanding Multiplication
	PM10.05	Multiplying by 2
	PM10.06	Multiplying by 5
	PM10.07	Multiplying by 10
	PM3.66	Mixed Multiplication 1 (2s,5s & 10s)
	PM3.67	Commutativity in Multiplication
	PM10.08	Dividing by 2
	PM10.09	Dividing by 5
	PM10.10	Dividing by 10
	PM3.68	Mixed Division 1 (2s, 5s & 10s)
	PM3.69	Multiplication and Division Fact Families
	PM3.70	Multiplication and Division Checkpoint
Fractions	PM4.37	Recognising and Finding a Half
	PM4.38	Recognising and Finding Quarters
	PM4.39	Recognising and Finding Thirds
	PM4.42	Fractions Checkpoint
Measurement	PM5.31	Measuring in Centimetres
	PM5.32	Solving Problems with Length and Height
	PM5.33	Measuring Mass in Grams

Strand	Code	Nugget Name
Measurement	PM5.34	Measuring Mass in Kilograms
	PM5.35	Solving Problems with Mass
	PM5.36	Measuring Volume and Capacity
	PM5.37	Solving Problems with Volume and Capacity
	PM5.38	Measuring Temperature
	PM5.39	Measurement Checkpoint
Money	PM6.11	Counting Money (Pence)
	PM6.12	Counting Money (Pounds)
	PM6.15	Making Amounts (Pounds and Pence)
	PM6.16	Making the Same Amount
	PM6.14	Finding Change 1 (from £1)
	PM6.17	Money Checkpoint
Time	PM7.10	Estimating Time
	PM7.19	Units of Time 1
	PM7.04	Telling the Time to the Nearest 5 Minutes
	PM7.05	Telling the Time to the Nearest 5 Minutes in Words
	PM7.18	Comparing Durations of Time
	PM7.20	Time Checkpoint
Geometry	PM8.01	Describing 2D Shapes
	PM8.02	Describing 3D Shapes

Strand	Code	Nugget Name
Geometry	PM8.08	Patterns and Sequences
	PM8.04	Angles in Turns 1
	PM8.09	Describing Position and Movement
	PM7.20	Geometry Checkpoint
Statistics	PM9.20	Tables 1
	PM9.16	Tally Charts
	PM9.14	Block Diagrams
	PM9.01	Pictograms
	PM9.21	Statistics Checkpoint

International Mathematics Course Mapping
Primary Mathematics – Grade 1

CENTURY

Course Content

Primary Mathematics – Grade 2

Diagnostics 9   **Strands** 12   **Nuggets** 136

This course is recommended for grade 2 (age 7-8) and is aligned with the PYP mathematics scope and sequence.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	9
Number and Place Value	20
Addition and Subtraction	26
Multiplication and Division	28
Fractions	12
Measurements	9
Money	10
Time	13
Geometry	7
Probability	1
Statistics	8
End of Year Assessments	2

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	MPYP0.01	Diagnostic: Number and Place Value
	MPYP0.02	Diagnostic: Addition and Subtraction
	MPYP0.03	Diagnostic: Multiplication and Division
	MPYP0.04	Diagnostic: Fractions
	MPYP0.05	Diagnostic: Geometry
	MPYP0.06	Diagnostic: Measurement
	MPYP0.07	Diagnostic: Time
	MPYP0.08	Diagnostic: Money
	MPYP0.09	Diagnostic: Statistics
Number and Place Value	PM10.01	Counting in Multiples of 2
	PM10.02	Counting in Multiples of 3
	PM10.03	Counting in Multiples of 5
	PM10.04	Counting in Multiples of 10
	PM1.01	Counting in Multiples of 4
	PM1.02	Counting in Multiples of 8
	PM1.03	Counting in Multiples of 50
	PM1.04	Counting in Multiples of 100
	PM1.34	2-Digit: Recognising Place Value

Strand	Code	Nugget Name
Number and Place Value	PM1.05	3-Digit: Recognising Place Value
	PM1.35	2-Digit: Representing Numbers
	PM1.36	Number Lines to 100
	PM1.37	Number Lines to 1000
	PM1.06	3-Digit: Representing Numbers up to 1000
	PM1.38	2-Digit: Finding 10 More or 10 Less
	PM1.07	3-Digit: Finding 10 More or 10 Less
	PM1.08	Finding 100 More or 100 Less
	PM1.09	Comparing Numbers with Greater Than and Less Than Symbols <>
	PM1.10	Ordering Numbers up to 1000
	PM1.11	Reading and Writing Numbers up to 1000
Addition and Subtraction	PM2.30	Number Bonds to 20
	PM2.31	Number Bonds to 100
	PM10.11	Single Digit Addition
	PM10.13	Single Digit Subtraction
	PM2.32	Adding Three 1-Digit Numbers
	PM2.33	2-Digit: Adding and Subtracting 1s (Not Crossing 10)
	PM2.34	2-Digit: Adding and Subtracting Multiples of 10
	PM2.35	2-Digit: Adding 1 Digit Numbers (Crossing 10)
	PM2.36	2-Digit: Subtracting 1 Digit Numbers (Crossing 10)
	PM2.37	2-Digit: Adding 2 Digit Numbers (No Exchanging)

Strand	Code	Nugget Name
Addition and Subtraction	PM2.38	2-Digit: Subtracting 2 Digit Numbers (No Exchanging)
	PM2.39	2-Digit: Adding 2 Digit Numbers (With Exchanging)
	PM2.40	2-Digit: Subtracting 2 Digit Numbers (With Exchanging)
	PM2.01	3-Digit: Adding and Subtracting 1s
	PM2.02	3-Digit: Adding and Subtracting 10s
	PM2.03	3-Digit: Adding and Subtracting 100s
	PM2.04	3-Digit: Column Addition (no Exchanging)
	PM2.05	3-Digit: Column Addition (with Exchanging)
	PM2.06	3-Digit: Column Subtraction (no Exchanging)
	PM2.07	3-Digit: Column Subtraction (with Exchanging)
	PM2.08	3-Digit: Addition and Subtraction Practice 1
	PM2.09	3-Digit: Addition and Subtraction Word Problems 1
	PM2.10	3-Digit: Rounding to the Nearest 10 and 100
	PM2.11	Estimating Using Rounding
	PM2.41	Addition and Subtraction Fact Families
	PM2.12	Checking Answers Using the Inverse 1
Multiplication and Division	PM3.62	Odd and Even Numbers
	PM3.63	Understanding Multiplication
	PM10.05	Multiplying by 2
	PM10.06	Multiplying by 5
	PM10.07	Multiplying by 10

Strand	Code	Nugget Name
	PM3.01	Multiplying by 3
	PM3.02	Multiplying by 4
	PM3.03	Multiplying by 8
	PM3.04	Mixed Multiplication
	PM10.08	Dividing by 2
	PM10.09	Dividing by 5
	PM10.10	Dividing by 10
	PM3.05	Dividing by 3
	PM3.06	Dividing by 4
	PM3.07	Dividing by 8
Multiplication and Division	PM3.08	Mixed Division
	PM3.64	Comparing Statements
	PM3.09	Multiplying Multiples of 10
	PM3.10	Multiplying Using Partitioning
	PM3.11	2-Digit: Multiplying Using the Grid Method
	PM3.12	2-Digit: Multiplying by 1-Digit
	PM3.65	Scaling Problems 1
	PM3.60	2-Digit: Dividing Using Partitioning (no Remainders)
	PM3.61	2-Digit: Dividing Using Partitioning (with Remainders)
	PM3.13	Short Division 1 (No Remainders)
	PM3.14	Short Division 2 (with Remainders)
	PM3.15	Multiplication and Division Practice 1
	PM3.16	Multiplication and Division Word Problems 1

Strand	Code	Nugget Name
	PM4.37	Recognising and Finding a Half
	PM4.38	Recognising and Finding Quarters
	PM4.39	Recognising and Finding Thirds
	PM4.01	Identifying Fractions
	PM4.40	Counting in Fractions
	PM4.02	Tenths
Fractions	PM4.03	Comparing and Ordering Fractions
	PM4.04	Adding and Subtracting Fractions
	PM4.05	Equivalent Fractions 1
	PM4.06	Finding Unit Fractions of Amounts
	PM4.07	Finding Non-Unit Fractions of Amounts
	PM4.08	Finding Fractions of Amounts
	PM5.01	Units of Measure
	PM5.02	Length
	PM5.03	Solving Length Problems
	PM5.04	Mass and Weight
Measurements	PM5.05	Solving Mass Problems
	PM5.06	Volume and Capacity
	PM5.07	Solving Volume and Capacity Problems
	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter

Strand	Code	Nugget Name
Money	PM6.11	Counting Money (Pence)
	PM6.12	Counting Money (Pounds)
	PM6.13	Converting Pounds and Pence
	PM6.15	Making Amounts (Pounds and Pence)
	PM6.01	Adding Amounts of Money
	PM6.02	Adding Amounts of Money 2
	PM6.14	Finding Change 1 (from £1)
	PM6.03	Finding Change 2
	PM6.04	Subtracting Amounts of Money
	PM6.05	Solving Money Problems 1
Time	PM7.01	Units of Time
	PM7.02	Times of Day
	PM7.03	Telling the Time in Words
	PM7.04	Telling the Time to the Nearest 5 Minutes
	PM7.05	Telling the Time to the Nearest 5 Minutes in Words
	PM7.06	Telling the Time to the Nearest Minute
	PM7.07	Roman Numerals (up to 20)
	PM7.08	Telling the Time with Roman Numerals
	PM7.09	12 Hour and 24 Hour Clocks
	PM7.10	Estimating Time
	PM7.11	Finding the Duration
	PM7.12	Start and End Times
	PM7.16	Calendars

Strand	Code	Nugget Name
Geometry	PM8.01	Describing 2D Shapes
	PM8.02	Describing 3D Shapes
	PM8.03	Nets of Shapes
	PM8.04	Angles in Turns 1
	PM8.05	Identifying Angles
	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
Probability	MPYP46.01	Probability Scale in Words
Statistics	PM9.17	Venn Diagrams
	PM9.18	Carroll Diagrams
	PM9.19	Tree Diagrams (for Sorting)
	PM9.16	Tally Charts
	PM9.01	Pictograms
	PM9.02	Tables 1
	PM9.14	Block Diagrams
	PM9.03	Bar Charts 1
End of Year Assessments	MPYP19.01	2 - Problem Solving and Reasoning Assessment
	MPYP19.02	2 - Arithmetic Assessment

Course Content
Primary Mathematics – Grade 3

Diagnostics 10   **Strands** 13   **Nuggets** 211

This course is recommended for grade 3 (age 8-9) and is aligned with the PYP mathematics scope and sequence.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	10
Number and Place Value	28
Addition and Subtraction	20
Multiplication and Division	39
Fractions and Decimals	16
Measurement	20
Time	14
Money	10
Geometry	15
Probability	1
Statistics	8
Catch Up	36
End of Year Assessments	4

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	MPYP0.10	Diagnostic: Number and Place Value
	MPYP0.11	Diagnostic: Addition and Subtraction
	MPYP0.12	Diagnostic: Multiplication and Division 1
	MPYP0.13	Diagnostic: Multiplication and Division 2
	MPYP0.15	Diagnostic: Fractions
	MPYP0.16	Diagnostic: Measurement
	MPYP0.17	Diagnostic: Time
	MPYP0.18	Diagnostic: Money
	MPYP0.19	Diagnostic: Geometry
	MPYP0.20	Diagnostic: Statistics
Number and Place Value	PM10.02	Counting in Multiples of 3
	PM1.01	Counting in Multiples of 4
	PM1.12	Counting in Multiples of 6
	PM1.13	Counting in Multiples of 7
	PM1.02	Counting in Multiples of 8
	PM1.14	Counting in Multiples of 9
	PM1.15	Counting in Multiples of 25
	PM1.03	Counting in Multiples of 50

Strand	Code	Nugget Name
	PM1.04	Counting in Multiples of 100
	PM1.16	Counting in Multiples of 1000
	PM1.05	3-Digit: Recognising Place Value
	PM1.06	3-Digit: Representing Numbers up to 1000
	PM1.11	Reading and Writing Numbers up to 1000
	PM1.37	Number Lines to 1000
	PM1.20	Place Value in 4 Digit Numbers
	PM1.07	3-Digit: Finding 10 More or 10 Less
Number and Place Value	PM1.08	Finding 100 More or 100 Less
	PM1.33	Finding 1000 More or 1000 Less
	PM1.21	2dp: Recognising Place Value in Decimals
	PM1.09	Comparing Numbers with Greater Than and Less Than Symbols <>
	PM1.10	Ordering Numbers up to 1000
	PM1.22	Comparing and Ordering Numbers
	PM2.10	3-Digit: Rounding to the Nearest 10 and 100
	PM1.23	Rounding to the Nearest 10, 100 and 1000
	PM1.18	Negative Numbers 1
	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
	PM7.07	Roman Numerals (up to 20)
	PM1.24	Roman Numerals (up to 100)

Strand	Code	Nugget Name
	PM2.01	3-Digit: Adding and Subtracting 1s
	PM2.02	3-Digit: Adding and Subtracting 10s
	PM2.03	3-Digit: Adding and Subtracting 100s
	PM2.04	3-Digit: Column Addition (no Exchanging)
	PM2.13	4-Digit: Column Addition (no Exchanging)
	PM2.05	3-Digit: Column Addition (with Exchanging)
	PM2.14	4-Digit: Column Addition (with Exchanging)
	PM2.06	3-Digit: Column Subtraction (no Exchanging)
Addition and Subtraction	PM2.15	4-Digit: Column Subtraction (no Exchanging)
	PM2.07	3-Digit: Column Subtraction (with Exchanging)
	PM2.16	4-Digit: Column Subtraction (with Exchanging)
	PM2.08	3-Digit: Addition and Subtraction Practice 1
	PM2.09	3-Digit: Addition and Subtraction Word Problems 1
	PM2.17	4-Digit: Addition and Subtraction Practice 2
	PM2.18	4-Digit: Addition and Subtraction Word Problems 2
	PM2.12	Checking Answers Using the Inverse 1
	PM2.19	Checking Answers Using the Inverse 2
	PM2.11	Estimating Using Rounding
	PM2.20	Estimating to Check Answers
	PM2.21	Solving Two-Step Problems

International Mathematics Course Mapping
Primary Mathematics – Grade 3

Strand	Code	Nugget Name
	PM3.01	Multiplying by 3
	PM3.02	Multiplying by 4
	PM3.17	Multiplying by 6
	PM3.18	Multiplying by 7
	PM3.03	Multiplying by 8
	PM3.19	Multiplying by 9
	PM3.20	Multiplying by 11
	PM3.21	Multiplying by 12
Multiplication and Division	PM3.22	Mixed Multiplication (Within the Times Tables)
	PM3.05	Dividing by 3
	PM3.06	Dividing by 4
	PM3.23	Dividing by 6
	PM3.24	Dividing by 7
	PM3.07	Dividing by 8
	PM3.25	Dividing by 9
	PM3.26	Dividing by 11
	PM3.27	Dividing by 12
	PM3.28	Mixed Division (Within the Times Tables)
	PM3.64	Comparing Statements

Strand	Code	Nugget Name
	PM3.29	Multiplying 3 Numbers Together
	PM3.30	Factor Pairs
	PM3.09	Multiplying Multiples of 10
	PM3.10	Multiplying Using Partitioning
	PM3.11	2-Digit: Multiplying Using the Grid Method
	PM3.12	2-Digit: Multiplying by 1-Digit
	PM3.31	2/3-Digit: Multiplying by 1-Digit
	PM3.65	Scaling Problems 1
	PM3.32	Scaling Problems 2
Multiplication and Division	PM3.33	Correspondence Problems 1
	PM3.34	Correspondence Problems 2
	PM3.60	2-Digit: Dividing Using Partitioning (no Remainders)
	PM3.61	2-Digit: Dividing Using Partitioning (with Remainders)
	PM3.35	2/3-Digit: Dividing Using Partitioning (no Remainders)
	PM3.36	2/3-Digit: Dividing Using Partitioning (with Remainders)
	PM3.37	2/3-Digit: Dividing Using Written Methods
	PM3.15	Multiplication and Division Practice 1
	PM3.16	Multiplication and Division Word Problems 1
	PM3.38	Multiplication and Division Practice 2
	PM3.39	Multiplication and Division Word Problems 2

Strand	Code	Nugget Name
Fractions and Decimals	PM4.01	Identifying Fractions
	PM4.03	Comparing and Ordering Fractions
	PM4.40	Counting in Fractions
	PM4.05	Equivalent Fractions 1
	PM4.06	Finding Unit Fractions of Amounts
	PM4.07	Finding Non-Unit Fractions of Amounts
	PM4.08	Finding Fractions of Amounts
	PM4.04	Adding and Subtracting Fractions
	PM4.02	Tenths
	PM4.09	Hundredths
	PM4.41	2dp: Decimal Complements to 1
	PM4.10	Decimal Equivalents (Tenths/Hundredths)
	PM4.11	Decimal Equivalents (Quarter, Half and Three Quarters)
	PM4.12	Dividing and Multiplying by 10 and 100 (Including Decimals)
	PM4.13	Rounding Decimals to the Nearest Whole Number
	PM4.14	Comparing Decimals
Measurement	PM5.01	Units of Measure
	PM5.02	Length
	PM5.10	Measuring Length
	PM5.11	Converting mm and cm

Strand	Code	Nugget Name
Measurement	PM5.12	Converting cm and m
	PM5.13	Converting m and km
	PM5.14	Converting Length
	PM5.03	Solving Length Problems
	PM5.04	Mass and Weight
	PM5.15	Measuring Mass
	PM5.16	Converting Mass
	PM5.05	Solving Mass Problems
	PM5.06	Volume and Capacity
	PM5.17	Measuring Volume
	PM5.18	Converting Volume
	PM5.07	Solving Volume and Capacity Problems
	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter
	PM5.20	Area by Counting
	PM5.21	Area
Time	PM7.01	Units of Time
	PM7.02	Times of Day
	PM7.03	Telling the Time in Words
	PM7.04	Telling the Time to the Nearest 5 Minutes
	PM7.05	Telling the Time to the Nearest 5 Minutes in Words

Strand	Code	Nugget Name
Time	PM7.06	Telling the Time to the Nearest Minute
	PM7.09	12 Hour and 24 Hour Clocks
	PM7.08	Telling the Time with Roman Numerals
	PM7.13	Converting Weeks, Days, Years and Months
	PM7.14	Converting Seconds, Minutes and Hours
	PM7.10	Estimating Time
	PM7.12	Start and End Times
	PM7.11	Finding the Duration
	PM7.16	Calendars
Money	PM6.06	Pounds and Pence
	PM6.15	Making Amounts (Pounds and Pence)
	PM6.01	Adding Amounts of Money
	PM6.02	Adding Amounts of Money 2
	PM6.07	Comparing Amounts of Money
	PM6.08	Estimating Amounts of Money
	PM6.03	Finding Change 2
	PM6.04	Subtracting Amounts of Money
	PM6.05	Solving Money Problems 1
	PM6.10	Solving Money Problems 2

Strand	Code	Nugget Name
Geometry	PM8.01	Describing 2D Shapes
	PM8.02	Describing 3D Shapes
	PM8.03	Nets of Shapes
	PM8.04	Angles in Turns 1
	PM8.05	Identifying Angles
	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
	MF29.01	Rotational Symmetry
	PM8.11	Triangles
	PM8.12	Quadrilaterals
	MF29.06	Congruence
	PM8.13	Sorting Shapes
	PM8.14	Describing Position
	PM8.15	Plotting Points
	PM8.16	Translation 1
Probability	MF46.01	Probability Scale in Words
Statistics	PM9.17	Venn Diagrams
	PM9.18	Carroll Diagrams
	PM9.19	Tree Diagrams (for Sorting)

Strand	Code	Nugget Name
Statistics	PM9.16	Tally Charts
	PM9.02	Tables 1
	PM9.01	Pictograms
	PM9.03	Bar Charts 1
	PM9.04	Line Graphs 1
Catch Up	PM10.11	Single Digit Addition
	PM10.13	Single Digit Subtraction
	PM1.34	2-Digit: Recognising Place Value
	PM1.35	2-Digit: Representing Numbers
	PM1.36	Number Lines to 100
	PM1.38	2-Digit: Finding 10 More or 10 Less
	PM2.30	Number Bonds to 20
	PM2.31	Number Bonds to 100
	PM2.32	Adding Three 1-Digit Numbers
	PM2.33	2-Digit: Adding and Subtracting 1s (Not Crossing 10)
	PM2.34	2-Digit: Adding and Subtracting Multiples of 10
	PM2.35	2-Digit: Adding 1 Digit Numbers (Crossing 10)
	PM2.36	2-Digit: Subtracting 1 Digit Numbers (Crossing 10)
	PM2.37	2-Digit: Adding 2 Digit Numbers (No Exchanging)
	PM2.38	2-Digit: Subtracting 2 Digit Numbers (No Exchanging)
	PM2.39	2-Digit: Adding 2 Digit Numbers (With Exchanging)
	PM2.40	2-Digit: Subtracting 2 Digit Numbers (With Exchanging)
	PM3.62	Odd and Even Numbers

Strand	Code	Nugget Name
Catch Up	PM3.63	Understanding Multiplication
	PM10.05	Multiplying by 2
	PM10.06	Multiplying by 5
	PM10.07	Multiplying by 10
	PM10.08	Dividing by 2
	PM10.09	Dividing by 5
	PM10.10	Dividing by 10
	PM10.01	Counting in Multiples of 2
	PM10.03	Counting in Multiples of 5
	PM10.04	Counting in Multiples of 10
	PM4.37	Recognising and Finding a Half
	PM4.38	Recognising and Finding Quarters
	PM4.39	Recognising and Finding Thirds
	PM6.11	Counting Money (Pence)
	PM6.12	Counting Money (Pounds)
	PM6.13	Converting Pounds and Pence
	PM6.14	Finding Change 1 (from £1)
	PM9.14	Block Diagrams
End of Year Assessments	MPYP19.01	2 - Problem Solving and Reasoning Assessment
	MPYP19.02	2 - Arithmetic Assessment
	MPYP19.03	3 - Problem Solving and Reasoning Assessment
	MPYP19.04	3 - Arithmetic Assessment

Course Content

Primary Mathematics – Grade 4

Diagnostics 14   **Strands** 16   **Nuggets** 212

This course is recommended for grade 4 (age 9-10) and is aligned with the PYP mathematics scope and sequence.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	14
Number and Place Value	15
Addition and Subtraction	13
Multiplication and Division	24
Times Tables and Division Facts	24
Mixed operations	7
Fractions	18
Fractions, decimals and percentages	18
Measurements	23
Time	15
Area, Perimeter and Volume	10
Properties of Shapes	24
Position and Direction	5
Probability	2

Strand	Nuggets
Statistics	10
End of Year Assessments	4

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	MPYP0.21	Diagnostic: Number and Place Value
	MPYP0.22	Diagnostic: Addition and Subtraction
	MPYP0.14	Diagnostic: Times Tables and Division Facts
	MPYP0.23	Diagnostic: Multiplication and Division
	MPYP0.24	Diagnostic: Mixed Operations
	MPYP0.25	Diagnostic: Fractions
	MPYP0.26	Diagnostic: Fractions, Decimals and Percentages
	MPYP0.27	Diagnostic: Measurements
	MPYP0.28	Diagnostic: Time
	MPYP0.29	Diagnostic: Area, Perimeter and Volume
	MPYP0.30	Diagnostic: Shapes
	MPYP0.31	Diagnostic: Angles
	MPYP0.32	Diagnostic: Position and Direction
	MPYP0.33	Diagnostic: Statistics

Strand	Code	Nugget Name
Number and Place Value	PM1.20	Place Value in 4 Digit Numbers
	PM1.25	Place Value up to 1,000,000
	PM1.22	Comparing and Ordering Numbers
	PM1.26	Comparing and Ordering Numbers to 1,000,000
	PM1.16	Counting in Multiples of 1000
	PM1.33	Finding 1000 More or 1000 Less
	PM1.27	Counting Forwards and Backwards in Powers of 10
	PM1.18	Negative Numbers 1
	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
	PM1.23	Rounding to the Nearest 10, 100 and 1000
	PM1.28	Rounding to the Nearest 10,000 and 100,000
	PM7.07	Roman Numerals (up to 20)
	PM1.24	Roman Numerals (up to 100)
	PM1.29	Roman Numerals (up to 1000)
	PM1.30	Roman Numerals (Beyond 1000)
Addition and Subtraction	PM2.13	4-Digit: Column Addition (no Exchanging)
	PM2.14	4-Digit: Column Addition (with Exchanging)
	PM2.22	4+ Digit: Column Addition
	PM2.15	4-Digit: Column Subtraction (no Exchanging)
	PM2.16	4-Digit: Column Subtraction (with Exchanging)
	PM2.23	4+ Digit: Column Subtraction

Strand	Code	Nugget Name
Addition and Subtraction	PM2.24	Mental Strategies for Addition 1
	PM2.25	Mental Strategies for Addition 2
	PM2.26	Mental Strategies for Subtraction 1
	PM2.27	Mental Strategies for Subtraction 2
	PM2.20	Estimating to Check Answers
	PM2.19	Checking Answers Using the Inverse 2
	PM2.21	Solving Two-Step Problems
Multiplication and Division	PM3.30	Factor Pairs
	PM3.40	Common Factors
	PM3.41	Prime Numbers
	PM3.42	Prime Factors
	PM3.43	Square Numbers
	PM3.44	Cube Numbers
	MPYP12.05	Roots of Squares and Cubes
	PM4.12	Dividing and Multiplying by 10 and 100 (Including Decimals)
	PM3.45	Multiplying by 10, 100 and 1000 (Involving Decimals up to 3 d.p.)
	PM3.46	Dividing by 10, 100 and 1000 (Involving Decimals Up to 3 d.p.)
	PM3.29	Multiplying 3 Numbers Together
	PM3.09	Multiplying Multiples of 10
	PM3.47	Mental Strategies for Multiplication 1
	PM3.48	Mental Strategies for Multiplication 2

International Mathematics Course Mapping
Primary Mathematics – Grade 4

Strand	Code	Nugget Name
Multiplication and Division	PM3.49	Mental Strategies for Division
	PM3.31	2/3-Digit: Multiplying by 1-Digit
	PM3.50	3/4-Digit: Multiplying by 1-Digit
	PM3.51	2-Digit: Multiplying by 2-Digits
	PM3.52	3/4-Digit: Multiplying by 2-Digits
	PM3.35	2/3-Digit: Dividing Using Partitioning (no Remainders)
	PM3.36	2/3-Digit: Dividing Using Partitioning (with Remainders)
	PM3.37	2/3-Digit: Dividing Using Written Methods
	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)
	PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
Times Tables and Division Facts	PM10.05	Multiplying by 2
	PM3.01	Multiplying by 3
	PM3.02	Multiplying by 4
	PM10.06	Multiplying by 5
	PM3.17	Multiplying by 6
	PM3.18	Multiplying by 7
	PM3.03	Multiplying by 8
	PM3.19	Multiplying by 9
	PM10.07	Multiplying by 10
	PM3.20	Multiplying by 11
	PM3.21	Multiplying by 12

Strand	Code	Nugget Name
Times Tables and Division Facts	PM3.22	Mixed Multiplication (Within the Times Tables)
	PM10.08	Dividing by 2
	PM3.05	Dividing by 3
	PM3.06	Dividing by 4
	PM10.09	Dividing by 5
	PM3.23	Dividing by 6
	PM3.24	Dividing by 7
	PM3.07	Dividing by 8
	PM3.25	Dividing by 9
	PM10.10	Dividing by 10
	PM3.26	Dividing by 11
	PM3.27	Dividing by 12
	PM3.28	Mixed Division (Within the Times Tables)
Mixed operations	PM11.01	Understanding the Equals Sign
	PM3.33	Correspondence Problems 1
	PM3.34	Correspondence Problems 2
	PM11.02	Solving Multistep Problems 1 (with Multiplication)
	PM11.03	Solving Multistep Problems 2 (with Division)
	PM3.32	Scaling Problems 2
	PM11.04	Multistep Scaling Problems

International Mathematics Course Mapping
Primary Mathematics – Grade 4

⊕ **CENTURY**

Strand	Code	Nugget Name
Fractions	PM4.01	Identifying Fractions
	PM4.06	Finding Unit Fractions of Amounts
	PM4.07	Finding Non-Unit Fractions of Amounts
	PM4.08	Finding Fractions of Amounts
	PM4.28	Multiplying Fractions by Whole Numbers
	PM4.30	Multiplying Mixed Numbers by Whole Numbers
	PM4.31	Fractions as Operators
	PM4.05	Equivalent Fractions 1
	PM4.15	Equivalent Fractions 2
	PM4.03	Comparing and Ordering Fractions
	PM4.16	Comparing Proper Fractions 1
	PM4.17	Mixed Numbers and Improper Fractions
	PM4.18	Comparing and Ordering Improper Fractions and Mixed Numbers
	PM4.04	Adding and Subtracting Fractions
	PM4.27	Adding and Subtracting Fractions with Different Denominators
	PM4.29	Adding and Subtracting Mixed Numbers 1
	PM4.20	Multiplying Fractions by Whole Numbers Practice
	PM4.19	Adding and Subtracting Fractions with Different Denominators Prac-
Fractions, decimals and percentages	PM4.02	Tenths
	PM4.09	Hundredths
	PM12.01	Thousandths

Strand	Code	Nugget Name
Fractions, decimals and percentages	PM1.21	2dp: Recognising Place Value in Decimals
	PM12.02	3dp: Recognising Place Value in Decimals
	PM4.14	Comparing Decimals
	PM4.13	Rounding Decimals to the Nearest Whole Number
	PM12.03	Rounding Decimals
	PM12.14	Adding and Subtracting Decimals (within 1)
	PM4.41	2dp: Decimal Complements to 1
	PM12.15	3dp: Decimal Complements to 1
	PM12.04	Adding and Subtracting Decimals
	PM4.10	Decimal Equivalents (Tenths/Hundredths)
	PM4.11	Decimal Equivalents (Quarter, Half and Three Quarters)
	PM12.05	Introduction to Percentages
	PM12.06	Fractions, Decimals and Percentages 1
	PM12.07	Finding Percentages 1
	PM12.08	Finding Percentages 2
Measurements	PM5.01	Units of Measure
	PM5.02	Length
	PM5.10	Measuring Length
	PM5.11	Converting mm and cm
	PM5.12	Converting cm and m
	PM5.13	Converting m and km

International Mathematics Course Mapping
Primary Mathematics – Grade 4

CENTURY

Strand	Code	Nugget Name
Measurements	PM5.14	Converting Length
	PM5.22	Imperial Units of Length
	PM5.03	Solving Length Problems
	PM5.23	Solving Length Problems with Conversion
	PM5.04	Mass and Weight
	PM5.15	Measuring Mass
	PM5.16	Converting Mass
	PM5.24	Imperial Units of Mass
	PM5.05	Solving Mass Problems
	PM5.25	Solving Mass Problems with Conversion
	PM5.06	Volume and Capacity
	PM5.17	Measuring Volume
	PM5.18	Converting Volume
	PM5.26	Imperial Units of Volume and Capacity
	PM5.07	Solving Volume and Capacity Problems
	PM5.27	Solving Volume and Capacity Problems with Conversion
	PM5.28	Estimating Volume and Capacity
Time	PM7.01	Units of Time
	PM7.03	Telling the Time in Words
	PM7.04	Telling the Time to the Nearest 5 Minutes
	PM7.05	Telling the Time to the Nearest 5 Minutes in Words

Strand	Code	Nugget Name
Time	PM7.06	Telling the Time to the Nearest Minute
	PM7.08	Telling the Time with Roman Numerals
	PM7.09	12 Hour and 24 Hour Clocks
	PM7.10	Estimating Time
	PM7.11	Finding the Duration
	PM7.12	Start and End Times
	PM7.13	Converting Weeks, Days, Years and Months
	PM7.14	Converting Seconds, Minutes and Hours
	PM7.15	Converting Units of Time
	PM7.16	Calendars
	PM7.17	Time Zones
Area, Perimeter and Volume	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter
	PM13.01	Calculating the Perimeter 2
	PM5.20	Area by Counting
	PM5.21	Area
	PM13.02	Area of Rectangles
	PM13.03	Area of Compound Shapes
	PM13.04	Estimating Area
	PM13.05	Area and Perimeter
	PM13.06	Volume of Shapes 1

International Mathematics Course Mapping
Primary Mathematics – Grade 4

CENTURY

Strand	Code	Nugget Name
Properties of Shapes	PM8.01	Describing 2D Shapes
	PM8.12	Quadrilaterals
	PM8.11	Triangles
	PM8.13	Sorting Shapes
	PM14.01	Regular and Irregular Polygons
	PM14.02	Lengths of Right-Angled Shapes
	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
	MF29.01	Rotational Symmetry
	MF29.06	Congruence
	PM8.02	Describing 3D Shapes
	PM8.17	Regular and Irregular Polyhedra
	PM14.03	Views of 3D Shapes
	PM8.04	Angles in Turns 1
	PM14.04	Angles in Turns 2
	PM8.05	Identifying Angles
	PM14.05	Identifying Angles 2
	PM14.06	Angles in Right-Angled Shapes
	PM14.07	Estimating Angles
	PM14.08	Measuring Angles
	PM14.09	Drawing Angles
	PM14.10	Right Angle Problems
	PM14.11	Angles on a Straight Line
	PM14.12	Angles Around a Point

Strand	Code	Nugget Name
Position and Direction	MC2.31	Describing Direction
	PM8.14	Describing Position
	PM8.15	Plotting Points
	PM8.16	Translation 1
	PM15.01	Reflection 1
Probability	MF46.01	Probability Scale in Words
	MF46.02	Probability Scale in Numbers
Statistics	PM9.17	Venn Diagrams
	PM9.18	Carroll Diagrams
	PM9.02	Tables 1
	PM9.05	Tables 2
	PM9.06	Two-Way Tables
	PM9.07	Timetables
	PM9.03	Bar Charts 1
	PM9.13	Bar Charts 2
	PM9.04	Line Graphs 1
	PM9.08	Line Graphs 2
End of Year Assessments	MPYP19.03	3 - Problem Solving and Reasoning Assessment
	MPYP19.04	3 - Arithmetic Assessment
	MPYP19.05	4 - Problem Solving and Reasoning Assessment (1)
	MPYP19.06	4 - Problem Solving and Reasoning Assessment (2)

Course Content
Primary Mathematics – Grade 5

Diagnostics 17   **Strands** 19   **Nuggets** 283

This course is recommended for grade 5 (age 10-11) and is aligned with the PYP mathematics scope and sequence.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	17
Number and Place Value	15
Addition and Subtraction	15
Times Tables and Division Facts	24
Multiplication and Division	28
Mixed Operations	10
Fractions	29
Fractions, Decimals and Percentages	20
Percentages	8
Ratio and Proportion	6
Algebra	11
Measurements	25
Time	15
Area, Perimeter and Volume	14
Properties of Shapes	31

Strand	Nuggets
Position and Direction	8
Probability	2
Statistics	18
End of Year Assessments	4

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	MPYP0.34	Diagnostic: Number and Place Value
	MPYP0.35	Diagnostic: Addition and Subtraction
	MPYP0.14	Diagnostic: Times Tables and Division Facts
	MPYP0.36	Diagnostic: Multiplication and Division 1
	MPYP0.37	Diagnostic: Multiplication and Division 2
	MPYP0.38	Diagnostic: Mixed Operations
	MPYP0.39	Diagnostic: Fractions
	MPYP0.40	Diagnostic: Fractions, Decimals and Percentages
	MPYP0.41	Diagnostic: Ratio and Proportion
	MPYP0.42	Diagnostic: Percentages
	MPYP0.43	Diagnostic: Algebra
	MPYP0.44	Diagnostic: Measurement
	MPYP0.45	Diagnostic: Area, Perimeter and Volume

Strand	Code	Nugget Name
Diagnostics	MPYP0.46	Diagnostic: Shapes
	MPYP0.47	Diagnostic: Angles
	MPYP0.48	Diagnostic: Position and Direction
	MPYP0.49	Diagnostic: Statistics
Number and Place Value	PM1.20	Place Value in 4 Digit Numbers
	PM1.25	Place Value up to 1,000,000
	PM1.31	Place Value up to 10,000,000
	PM1.22	Comparing and Ordering Numbers
	PM1.26	Comparing and Ordering Numbers to 1,000,000
	PM1.27	Counting Forwards and Backwards in Powers of 10
	PM1.18	Negative Numbers 1
	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
	PM1.32	Negative Numbers 3
	PM1.23	Rounding to the Nearest 10, 100 and 1000
	PM1.28	Rounding to the Nearest 10,000 and 100,000
	PM7.07	Roman Numerals (up to 20)
	PM1.24	Roman Numerals (up to 100)
	PM1.29	Roman Numerals (up to 1000)
	PM1.30	Roman Numerals (Beyond 1000)

Strand	Code	Nugget Name
Addition and Subtraction	PM2.13	4-Digit: Column Addition (no Exchanging)
	PM2.14	4-Digit: Column Addition (with Exchanging)
	PM2.22	4+ Digit: Column Addition
	PM2.15	4-Digit: Column Subtraction (no Exchanging)
	PM2.16	4-Digit: Column Subtraction (with Exchanging)
	PM2.23	4+ Digit: Column Subtraction
	PM2.24	Mental Strategies for Addition 1
	PM2.25	Mental Strategies for Addition 2
	PM2.26	Mental Strategies for Subtraction 1
	PM2.27	Mental Strategies for Subtraction 2
	PM2.20	Estimating to Check Answers
	PM2.19	Checking Answers Using the Inverse 2
	PM2.29	Inverse Operations
	PM2.21	Solving Two-Step Problems
	PM2.28	Multistep Addition and Subtraction Problems
Times Tables and Division Facts	PM10.05	Multiplying by 2
	PM3.01	Multiplying by 3
	PM3.02	Multiplying by 4
	PM10.06	Multiplying by 5
	PM3.17	Multiplying by 6
	PM3.18	Multiplying by 7

International Mathematics Course Mapping
Primary Mathematics – Grade 5

CENTURY

Strand	Code	Nugget Name
	PM3.03	Multiplying by 8
	PM3.19	Multiplying by 9
	PM10.07	Multiplying by 10
	PM3.20	Multiplying by 11
	PM3.21	Multiplying by 12
	PM3.22	Mixed Multiplication (Within the Times Tables)
	PM10.08	Dividing by 2
	PM3.05	Dividing by 3
	PM3.06	Dividing by 4
Times Tables and Division Facts	PM10.09	Dividing by 5
	PM3.23	Dividing by 6
	PM3.24	Dividing by 7
	PM3.07	Dividing by 8
	PM3.25	Dividing by 9
	PM10.10	Dividing by 10
	PM3.26	Dividing by 11
	PM3.27	Dividing by 12
	PM3.28	Mixed Division (Within the Times Tables)
	PM3.30	Factor Pairs
Multiplication and Division	PM3.40	Common Factors
	PM3.41	Prime Numbers
	PM3.42	Prime Factors
	PM3.55	Common Multiples

Strand	Code	Nugget Name
	PM3.43	Square Numbers
	PM3.44	Cube Numbers
	MPYP12.05	Roots of Squares and Cubes
	PM4.12	Dividing and Multiplying by 10 and 100 (Including Decimals)
	PM3.45	Multiplying by 10, 100 and 1000 (Involving Decimals up to 3 d.p.)
	PM3.46	Dividing by 10, 100 and 1000 (Involving Decimals Up to 3 d.p.)
	PM3.09	Multiplying Multiples of 10
	PM3.47	Mental Strategies for Multiplication 1
	PM3.48	Mental Strategies for Multiplication 2
	PM3.49	Mental Strategies for Division
Multiplication and Division	PM3.31	2/3-Digit: Multiplying by 1-Digit
	PM3.50	3/4-Digit: Multiplying by 1-Digit
	PM3.51	2-Digit: Multiplying by 2-Digits
	PM3.52	3/4-Digit: Multiplying by 2-Digits
	PM3.35	2/3-Digit: Dividing Using Partitioning (no Remainders)
	PM3.36	2/3-Digit: Dividing Using Partitioning (with Remainders)
	PM3.37	2/3-Digit: Dividing Using Written Methods
	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)
	PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
	PM3.56	Dividing by 2 Digit Numbers Using Short Division
	PM3.57	Long Division 1 (Dividing by a Single Digit Number)
	PM3.58	Long Division 2 (Dividing by a 2 Digit Number)
	PM3.59	Division by Chunking

International Mathematics Course Mapping
Primary Mathematics – Grade 5

Strand	Code	Nugget Name
Mixed Operations	PM11.01	Understanding the Equals Sign
	PM3.33	Correspondence Problems 1
	PM3.34	Correspondence Problems 2
	PM11.02	Solving Multistep Problems 1 (with Multiplication)
	PM11.03	Solving Multistep Problems 2 (with Division)
	PM3.32	Scaling Problems 2
	PM11.04	Multistep Scaling Problems
	PM11.05	Operations of Equal Priority
	PM11.06	BIDMAS: 4 Operations and Brackets
	PM11.07	BIDMAS: Indices
Fractions	PM4.01	Identifying Fractions
	PM4.06	Finding Unit Fractions of Amounts
	PM4.07	Finding Non-Unit Fractions of Amounts
	PM4.08	Finding Fractions of Amounts
	PM4.36	Finding Fractions of Amounts: Finding the Whole
	PM4.31	Fractions as Operators
	PM4.05	Equivalent Fractions 1
	PM4.15	Equivalent Fractions 2
	PM4.03	Comparing and Ordering Fractions
	PM4.16	Comparing Proper Fractions 1
	PM4.21	Comparing Proper Fractions 2
	PM4.17	Mixed Numbers and Improper Fractions

Strand	Code	Nugget Name
Fractions	PM4.34	Fractions on a Number Line 1
	PM4.35	Fractions on a Number Line 2
	PM4.18	Comparing and Ordering Improper Fractions and Mixed Numbers
	PM4.04	Adding and Subtracting Fractions
	PM4.27	Adding and Subtracting Fractions with Different Denominators
	PM4.32	Adding and Subtracting Fractions with Different Denominators 2
	PM4.29	Adding and Subtracting Mixed Numbers 1
	PM4.33	Adding and Subtracting Mixed Numbers 2
	PM4.23	Simplifying Fractions
	PM4.28	Multiplying Fractions by Whole Numbers
	PM4.30	Multiplying Mixed Numbers by Whole Numbers
	PM4.24	Multiplying Simple Pairs of Proper Fractions
	PM4.25	Dividing Fractions by Whole Numbers
	PM4.26	Fractions Arithmetic Practice
	PM4.19	Adding and Subtracting Fractions with Different Denominators Practice 1
	PM4.22	Adding and Subtracting Fractions with Different Denominators Practice 2
	PM4.20	Multiplying Fractions by Whole Numbers Practice
Fractions, Decimals and Percentages	PM4.02	Tenths
	PM4.09	Hundredths
	PM12.01	Thousandths
	PM1.21	2dp: Recognising Place Value in Decimals

Strand	Code	Nugget Name
Fractions, Decimals and Percentages	PM12.02	3dp: Recognising Place Value in Decimals
	PM4.14	Comparing Decimals
	PM4.13	Rounding Decimals to the Nearest Whole Number
	PM12.03	Rounding Decimals
	PM12.14	Adding and Subtracting Decimals (within 1)
	PM4.41	2dp: Decimal Complements to 1
	PM12.15	3dp: Decimal Complements to 1
	PM12.04	Adding and Subtracting Decimals
	PM12.09	Multiplying Decimals
	PM12.10	Dividing Decimals
	PM4.10	Decimal Equivalents (Tenths/Hundredths)
	PM4.11	Decimal Equivalents (Quarter, Half and Three Quarters)
	PM12.11	Converting Decimals to Fractions
	PM12.12	Fractions to Decimals Using Division
	PM12.06	Fractions, Decimals and Percentages 1
	PM12.13	Fractions, Decimals and Percentages 2
Percentages	PM12.05	Introduction to Percentages
	PM12.07	Finding Percentages 1
	PM12.08	Finding Percentages 2
	PM16.01	Finding Percentages of Amounts 1
	PM16.02	Finding Percentages of Amounts 2

Strand	Code	Nugget Name
Percentages	PM16.03	Finding Percentages of Amounts 3
	PM16.04	Finding Percentages of Amounts 4
	PM16.05	Percentages (Missing Values)
Ratio and Proportion	PM17.01	Introduction to Ratio
	PM17.02	Simplifying Ratios
	PM17.03	Ratios and Fractions
	PM17.04	Sharing into a Given Ratio
	PM17.05	Similar Shapes
	PM17.06	Proportion
Algebra	PM18.01	Sequences
	PM18.02	Function Machines
	PM18.03	Forming Expressions 1
	PM18.04	Forming Expressions 2
	PM18.05	Forming Expressions 3
	PM18.06	Substitution
	PM18.07	Formulae
	PM18.08	Solving 1 Step Equations
	PM18.09	Solving 2 Step Equations
	PM18.10	Satisfying Equations with 2 Variables
	PM18.11	Enumerating Possibilities

Strand	Code	Nugget Name
Measurements	PM5.01	Units of Measure
	PM5.02	Length
	PM5.10	Measuring Length
	PM5.03	Solving Length Problems
	PM5.23	Solving Length Problems with Conversion
	PM5.04	Mass and Weight
	PM5.15	Measuring Mass
	PM5.05	Solving Mass Problems
	PM5.25	Solving Mass Problems with Conversion
	PM5.06	Volume and Capacity
	PM5.17	Measuring Volume
	PM5.07	Solving Volume and Capacity Problems
	PM5.27	Solving Volume and Capacity Problems with Conversion
	PM5.28	Estimating Volume and Capacity
	PM5.11	Converting mm and cm
	PM5.12	Converting cm and m
	PM5.13	Converting m and km
	PM5.14	Converting Length
	PM5.16	Converting Mass
	PM5.18	Converting Volume
	PM5.29	Converting Metric Measures

Strand	Code	Nugget Name
Measurements	PM5.22	Imperial Units of Length
	PM5.24	Imperial Units of Mass
	PM5.26	Imperial Units of Volume and Capacity
	PM5.30	Converting Miles and Kilometres
Time	PM7.01	Units of Time
	PM7.03	Telling the Time in Words
	PM7.04	Telling the Time to the Nearest 5 Minutes
	PM7.05	Telling the Time to the Nearest 5 Minutes in Words
	PM7.06	Telling the Time to the Nearest Minute
	PM7.08	Telling the Time with Roman Numerals
	PM7.09	12 Hour and 24 Hour Clocks
	PM7.10	Estimating Time
	PM7.11	Finding the Duration
	PM7.12	Start and End Times
	PM7.13	Converting Weeks, Days, Years and Months
	PM7.14	Converting Seconds, Minutes and Hours
	PM7.15	Converting Units of Time
	PM7.16	Calendars
	PM7.17	Time Zones

Strand	Code	Nugget Name
Area, Perimeter and Volume	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter
	PM13.01	Calculating the Perimeter 2
	PM5.20	Area by Counting
	PM5.21	Area
	PM13.02	Area of Rectangles
	PM13.05	Area and Perimeter
	PM13.03	Area of Compound Shapes
	PM13.04	Estimating Area
	PM13.07	Area of Parallelograms
	PM13.08	Area of Right-Angled Triangles
	PM13.09	Area of Triangles
	PM13.06	Volume of Shapes 1
	PM13.10	Volume of Shapes 2
Properties of Shapes	PM8.01	Describing 2D Shapes
	PM8.11	Triangles
	PM8.12	Quadrilaterals
	PM14.13	Circles
	PM14.01	Regular and Irregular Polygons
	PM14.02	Lengths of Right-Angled Shapes
	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
	PM8.13	Sorting Shapes

Strand	Code	Nugget Name
Properties of Shapes	MF29.01	Rotational Symmetry
	MF29.06	Congruence
	PM8.02	Describing 3D Shapes
	PM8.17	Regular and Irregular Polyhedra
	PM14.03	Views of 3D Shapes
	PM8.03	Nets of Shapes
	PM14.14	Nets of Shapes 2
	PM8.04	Angles in Turns 1
	PM14.04	Angles in Turns 2
	PM8.05	Identifying Angles
	PM14.05	Identifying Angles 2
	PM14.07	Estimating Angles
	PM14.08	Measuring Angles
	PM14.09	Drawing Angles
	PM14.06	Angles in Right-Angled Shapes
	PM14.10	Right Angle Problems
	PM14.11	Angles on a Straight Line
	PM14.12	Angles Around a Point
	PM14.15	Vertically Opposite Angles
	PM14.16	Angles in Triangles
	PM14.17	Angles in Quadrilaterals
	PM14.18	Angles in Regular Polygons

International Mathematics Course Mapping
Primary Mathematics – Grade 5

CENTURY

Strand	Code	Nugget Name
Position and Direction	MC2.31	Describing Direction
	PM8.14	Describing Position
	PM8.15	Plotting Points
	PM15.02	Four Quadrants
	PM8.16	Translation 1
	PM15.03	Translation 2
	PM15.01	Reflection 1
	PM15.04	Reflection 2
Probability	MF46.01	Probability Scale in Words
	MF46.02	Probability Scale in Numbers
Statistics	PM9.18	Carroll Diagrams
	PM9.17	Venn Diagrams
	PM9.01	Pictograms
	PM9.03	Bar Charts 1
	PM9.13	Bar Charts 2
	PM9.02	Tables 1
	PM9.05	Tables 2
	PM9.07	Timetables
	PM9.06	Two-Way Tables
	PM9.04	Line Graphs 1

Strand	Code	Nugget Name
Statistics	PM9.08	Line Graphs 2
	PM9.09	Line Graphs 3
	PM9.10	Pie Charts 1
	PM9.11	Pie Charts 2
	PM9.12	Finding the Mean
	MF49.01	Mode
	MPYP9.02	Median
	PM9.15	Range
End of Year Assessments	MPYP19.05	4 - Problem Solving and Reasoning Assessment (1)
	MPYP19.06	4 - Problem Solving and Reasoning Assessment (2)
	MPYP19.07	5 - Problem Solving and Reasoning Assessment (1)
	MPYP19.08	5 - Problem Solving and Reasoning Assessment (2)

Course Content
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Diagnostics 2 **Strands** 12 **Nuggets** 816
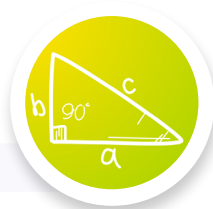
This course provides the mathematical skills, knowledge and practice required for those studying MYP, with diagnostics to test proficiency in skills learned in PYP.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

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Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strand	Code	Nugget Name
Diagnostics	MMYP0.01	MYP Prior Learning Diagnostic 1
	MMYP0.02	MYP Prior Learning Diagnostic 2
Topic Diagnostics	MF0.02	Diagnostic: Algebra 1
	MF0.03	Diagnostic: Geometry 1
	MF0.04	Diagnostic: Number 2
	MF0.05	Diagnostic: Probability 1
	MF0.06	Diagnostic: Statistics 1
	MF0.07	Diagnostic: Algebra 2
	MF0.08	Diagnostic: Geometry 2
	MH0.09	Diagnostic: Number 3

Strand	Code	Nugget Name
Topic Diagnostics	MH0.10	Diagnostic: Number 4
	MH0.11	Diagnostic: Algebra 3
	MH0.12	Diagnostic: Algebra 4
	MH0.13	Diagnostic: Algebra 5
	MH0.14	Diagnostic: Geometry 3
	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems
	MH0.16	Diagnostic: Statistics 2
	MH0.17	Diagnostic: Probability 2
	MH0.18	Diagnostic: Geometry - Advanced Trigonometry
Time	MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past
	MF37.02	Reading a 12-Hour Clock 2: Multiples of 5
	MF37.03	Reading a 12-Hour Clock 3: Mixed
	MF37.04	Converting Time: AM and PM
	MF37.05	Converting Time: Seconds, Minutes and Hours
	MF37.06	Converting Time: Days, Weeks and Years
	MF37.07	Calendar Months
	MF37.08	Converting Time: Mixed Units
	MF37.09	Problems with Time
Integers	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MH2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction

Strand	Code	Nugget Name
Integers	MF2.05	Adding Negatives
	MF2.06	Subtracting Negatives
	MH2.07	Negatives and Positives
	MF2.08	Ordering Integers
	MF2.09	Ordering Decimals
	MF2.10	Ordering Negatives
	MF2.11	Multiplying by Powers of Ten
	MF2.12	Dividing by Powers of Ten
	MF2.13	Rounding to the nearest 10, 100 and 1000
Number Operations	MF3.01	Column Addition
	MF3.02	Column Subtraction
	MF3.03	Addition and Subtraction: Worded Questions
	MF3.04	Multiplying Negatives
	MF3.05	Dividing Negatives
	MF3.06	Multiplying and Dividing with Negatives
	MF3.07	Column Multiplication
	MF3.08	Grid Multiplication
	MF3.09	Multiplication with Napier's Bones
	MF3.10	Testing for Divisibility
	MF3.11	Short Division
	MF3.12	Dividing by Multi-Digit Numbers
	MF3.13	Multiplication and Division: Worded Questions

Strand	Code	Nugget Name
Number Operations	MF3.14	BIDMAS Introduction
	MF3.15	BIDMAS Intermediate
	MF3.16	BIDMAS Advanced
	MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
	MF3.18	Using a Calculator 2: Multiple Numbers
Squares & Square Roots	MF12.01	Squares
	MF12.02	Cubes
	MF12.03	Squaring and Cubing Negatives
	MF12.04	Powers
	MF12.05	Roots of Squares and Cubes
	MF12.06	Roots
	MH12.07	Estimating Powers and Roots
Fractions	MF4.01	Expressing Fractions
	MF4.02	Ordering Fractions
	MF4.03	Equivalent Fractions
	MF4.04	Simplifying Fractions
	MF4.05	Shading Fractions
	MF4.06	Mixed and Improper Fractions
	MF4.07	Adding Fractions 1: Same Denominator
	MF4.08	Adding Fractions 2: Convert 1 Denominator
	MF4.09	Adding Fractions 3: Convert 1 Denominator (Sum >1)
	MF4.10	Adding Fractions 4: Convert all Denominators

Strand	Code	Nugget Name
Fractions	MF4.11	Subtracting Fractions
	MF4.12	Adding and Subtracting Fractions
	MF4.13	Adding Improper Fractions
	MF4.14	Adding Mixed Numbers
	MF4.15	Adding Improper Fractions and Mixed Numbers
	MF4.16	Subtracting Improper Fractions
	MF4.17	Subtracting Mixed Numbers
	MF4.18	Subtracting Improper Fractions and Mixed Numbers
	MF4.19	Adding and Subtracting Improper Fractions
	MF4.20	Adding and Subtracting Mixed Numbers
	MF4.21	Adding and Subtracting Improper Fractions and Mixed Numbers
	MF4.22	Reciprocals
	MF4.23	Multiplying Fractions 1
	MF4.24	Multiplying Fractions 2
	MF4.25	Dividing Fractions
	MF4.26	Multiplying and Dividing Mixed Numbers
	MF4.27	Multiplying with Whole Numbers and Fractions
	MF4.28	Dividing with Whole Numbers and Fractions
	MF4.29	Fraction of Amounts: Non-Calculator
	MF4.30	Fraction of Amounts: Calculator
	MF4.31	Increasing and Decreasing by Fractions
	MF4.32	Reverse Fractions

Strand	Code	Nugget Name
Fractions	MF4.33	Reverse Fractions: Worded Questions
	MF4.34	Estimating Products of Fractions
	MF4.35	Dividing Fractions (Bar Model)
Decimals	MF6.01	Decimal Place Value
	MF6.02	Adding Decimals 1: Calculations
	MF6.03	Adding Decimals 2: Worded Problems
	MF6.04	Subtracting Decimals 1: Calculations
	MF6.05	Subtracting Decimals 2: Worded Problems
	MF6.06	Multiplying Decimals 1
	MF6.07	Multiplying Decimals 2
	MF6.08	Multiplying Decimals: Worded Questions
	MF6.09	Dividing Decimals
	MF6.10	Dividing Decimals by Decimals
	MF6.11	Dividing by Large Numbers
	MF6.12	Manipulating Decimal Calculations with Multiplication
	MF6.13	Manipulating Decimal Calculations with Division
	MF6.14	Multiplying Decimals with Napier's Bones
Percentages	MF7.07	Finding Multiples of Tens in Percentages
	MF7.09	Finding Percentages of Amounts 2
	MF7.14	Estimate with Percentages
	MF7.03	Finding 25%
	MF7.08	Finding Percentages of Amounts 1

Strand	Code	Nugget Name
Percentages	MF7.15	Percentages of Amounts: Modelling
	MF7.02	Finding 50%
	MF7.12	Comparing Percentages 2
	MF7.04	Finding 10%
	MF7.01	Understanding Percentages
	MF7.13	Finding Decimal Percentages
	MF7.11	Comparing Percentages 1: Multiples of 5%
	MF7.10	Finding Percentages of Amounts 3
	MF7.06	Finding 1%
	MF7.05	Finding 5%
	MF10.02	Percentage Decrease
	MF10.06	Percentage Increase and Decrease: Modelling
	MF10.05	Simple Interest
	MF10.03	Percentage Increase and Decrease
	MF10.04	Finding Percentages greater than 100
	MF10.01	Percentage Increase
	MF11.05	Repeated Percentage Increase and Decrease (Calculator)
	MH11.14	Exponential Growth
	MF11.07	Compound Interest (Calculator)
	MF11.02	Finding Percentages 2: > 100% or Non-Integer Percentages (Calculator)
	MF11.12	Percentage Error
	MF11.11	Reverse Percentage

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Strand	Code	Nugget Name
Percentages	MF11.03	Percentage Increase and Decrease (Calculator)
	MF11.14	Percentage Problems
	MH11.16	Exponential Growth and Decay
	MF11.18	Reverse Percentages Introduction: Modelling
	MF11.04	Percentage Change
	MF11.19	Reverse Percentages: Modelling
	MF11.01	Finding Percentages 1: Integer Percentages < 100% (Calculator)
	MF11.10	Simple and Compound Interest (Calculator)
	MF11.06	Simple Interest (Calculator)
	MF11.13	Express One Amount as a Percentage of Another
	MF11.09	Compound Interest and Depreciation (Calculator)
	MF11.08	Depreciation (Calculator)
	MH11.15	Exponential Decay
FDP	MF8.10	Fractions to Decimals (Calculator)
	MF8.01	Introduction to Fractions, Decimals and Percentages
	MF8.09	Decimals to Fractions
	MF8.07	Fractions to Decimals 2: Division
	MF8.08	Percentage to Fractions
	MF8.04	Decimals to Percentage
	MF8.12	Percentage to Fractions (Calculator)
	MF8.18	Converting Percentage (Less than 1%)
	MF8.03	Fractions to Percentage
	MF8.02	Converting Fractions to Denominator 10

Strand	Code	Nugget Name
FDP	MF8.06	Fractions to Decimals 1: Equivalent Fractions
	MF8.11	Fractions to Percentages (Calculator)
	MF8.19	Converting Percentage (Greater than 100%)
	MF8.17	Ordering Fractions, Decimals and Percentages 4: Numbers More than 1 (Calculator)
	MF8.16	Ordering Fractions, Decimals and Percentages 3: Numbers Less than 1 (Calculator)
	MF8.14	Ordering Fractions, Decimals and Percentages 1:Unit Fractions (Non-Calculator)
	MF8.05	Percentage to Decimals
	MF8.15	Ordering Fractions, Decimals and Percentages 2: Non-Unit Fractions (Non-Calculator)
	MF8.13	Decimals to Fractions (Calculator)
Factors, Multiples & Primes	MF5.01	Odds and Evens with Addition and Subtraction
	MF5.02	Odds and Evens with Multiplication
	MF5.03	Primes
	MF5.04	Multiples
	MF5.05	Factors
	MF5.06	Multiples and Factors
	MF5.07	Lowest Common Multiple - Listing Technique
	MF5.08	Highest Common Factor - Listing Technique
	MF5.09	Prime Factorisation 1: Factor Tree Given
	MF5.10	Prime Factorisation 2
	MF5.11	Uses of Prime Factorisation
	MF5.12	HCF Using Prime Factorisation: Venn Diagrams

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CENTURY

Strand	Code	Nugget Name
Factors, Multiples & Primes	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors
	MF5.14	LCM Using Prime Factorisation: Venn Diagrams
	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors
	MF5.16	HCF and LCM with Prime Factorisation
Number Sequences	MF22.01	Continuing Sequences
	MF22.02	Linear Sequences: Finding the Term-to-Term Rule
	MF22.03	Linear Sequences: Using the Term-to-Term Rule
	MF22.04	Linear Sequences with Diagrams 1: Term-to-Term Rule
	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
	MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)
	MF22.08	Linear Sequences: Finding the nth Term 2 (Decreasing)
	MF22.09	Linear Sequences with Diagrams 2: nth Term
	MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
Number Lines & Simple Inequalities	MF25.01	Representing Inequalities on a Number Line
	MF25.02	Representing Two Sided Inequalities on a Number Line
	MF25.03	Interpreting Inequalities from a Number Line
	MF25.04	Interpreting Two Sided Inequalities from a Number Line
	MF25.05	Finding Integer Solutions to Inequalities
Ratios	MF15.01	Introduction to Ratio
	MF15.02	Simplifying Ratios
	MF15.03	Converting Ratios into the Form 1:n

Strand	Code	Nugget Name
Ratios	MF15.04	Converting Ratios into the Form n:1
	MF15.05	3 Part Ratios
	MF15.06	Simplifying Ratios with Units
	MH15.07	Sharing with a Given Ratio 1
	MF15.08	Sharing with a Given Ratio 2 (Calculator)
	MF15.09	Sharing with a Given Ratio 3 (Calculator): Working Backwards
	MF15.10	Sharing with a Given Ratio 4 (Calculator): 3 Part Ratios
	MF15.11	Converting Ratios into Fractions
	MF15.12	Converting Fractions into Ratios
	MF15.13	Part of a Ratio to the Whole
	MF15.14	Ratio and Algebra
Recurring Decimals	MH51.01	Fractions to Recurring Decimals 1: Special Cases
	MH51.02	Fractions to Recurring Decimals 2: Long Division
	MH51.03	Fractions to Recurring Decimals 3: Long Division (Numbers > 1)
	MH51.04	Recurring Decimals 1: 1–2 Digits
	MH51.05	Recurring Decimals 2: 2–4 Digits
	MH51.06	Recurring Decimals 3: Non-Recurring and Recurring Digits
	MH51.07	Recurring Decimals 4: Special Cases
	MH51.08	Recurring Decimals 5: Calculations
Exponents	MF13.01	Powers of 0 and 1
	MF13.02	Raising a Fraction to a Power
	MF13.03	Multiplying Indices

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Strand	Code	Nugget Name
Exponents	MF13.04	Dividing Indices
	MF13.05	Power of a Power
	MF13.07	Combination of Indices
	MF13.06	Negative Indices
	MH13.08	Fractional Indices 1: Square and Cube Root
	MH13.09	Fractional Indices 2: Non-Unit Fraction
	MH13.10	Fractional Indices 3: Negative Unit Fractions
	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions
	MH13.12	Fractional Indices 5: Fraction Base
	MH13.13	Fractional Indices: Calculator
	MH13.14	Solving Problems with Indices 1: Combination of Rules
	MH13.15	Solving Problems with Indices 2: Combination of Rules
	MH13.16	Solving Problems with Indices 3: Working Backwards
	MH13.17	Solving Problems with Indices 4: Solving Equations
	MH13.18	Solving Problems with Indices 5: Including Square/Cube Root Form
	MH13.19	Solving Problems with Indices 6: Challenge
	MH13.20	Solving Problems with Indices 7: Challenge
Inequalities	MH25.13	Solving Quadratic Inequalities Graphically
	MF25.06	Solving Inequalities: One Step
	MF25.07	Solving Inequalities: Negative Variable
	MF25.08	Solving Inequalities: Two Step
	MF25.09	Solving Inequalities: One Step and Two Sided

Strand	Code	Nugget Name
Inequalities	MF25.10	Solving Inequalities: Multi Step and Two Sided
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides
	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line
	MH25.14	Solving Inequalities: Quadratics 1
	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)
	MH25.16	Solving Inequalities: Quadratics 3 (Factorising)
	MH25.17	Solving Multiple Linear Inequalities
Standard Form	MF14.01	The Positive Powers of 10
	MF14.02	The Negative Powers of 10
	MF14.03	Standard Form to Ordinary
	MF14.04	Ordinary to Standard Form
	MF14.05	Fixing into Standard Form
	MF14.06	Ordering Standard Form
	MF14.07	Adding and Subtracting with Standard Form
	MF14.08	Multiplying with Standard Form
	MF14.09	Dividing with Standard Form
	MF14.10	Standard Form: Worded problems with calculator
Direct & Inverse Proportion	MF16.01	Introduction to Proportion
	MF16.02	Recipe Ratio 1: Find Amount of Ingredients
	MF16.03	Recipe Ratio 2: Find the Number of People
	MF16.04	Better Value
	MF16.05	Direct Proportion 1: Conversions

Strand	Code	Nugget Name
Direct & Inverse Proportion	MF16.06	Direct Proportion 2: y = kx
	MF16.07	Inverse Proportion 1: Introduction
	MF16.08	Inverse Proportion 2: y = k/x
	MF16.09	Proportions on a Graph
	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence
	MH16.10	Direct Proportion 3: y = kxᵃ and y = k√x
	MH16.11	Inverse Proportion 3: y = k/xᵃ and y = k/√x
	MH16.12	Interpreting Direct and Inverse Proportion 1: y = kx and y = k/xᵃ
	MH16.13	Interpreting Direct and Inverse Proportion 2: Problem Solving
	MH16.14	Proportions on a Graph 2: Linear, Quadratic, Cubic and Root
	MH16.15	Two Step Direct and Inverse Proportion
Bounds	MF9.13	Bounds 1: Introduction
	MF9.14	Bounds 2: Simple Calculation
	MF9.15	Bounds 3: Intervals
	MH9.16	Bounds 4: Addition
	MH9.17	Bounds 5: Subtraction
	MH9.18	Bounds 6: Multiplication
	MH9.19	Bounds 7: Division
	MH9.20	Bounds 8: Mixed Operations
	MH9.21	Bounds 9: Formulae
	MH9.22	Bounds 10: Suitable Degrees of Accuracy
	MH9.23	Bounds 11: Discrete Variables

Strand	Code	Nugget Name
Surds	MI47.21	Rational and Irrational Numbers
	MH52.01	Surds: Introduction
	MH52.02	Surds: Multiplication and Division
	MH52.03	Surds: Simplifying 1
	MH52.04	Surds: Simplifying 2 (Products of Surds)
	MH52.05	Surds: Simplifying 3 (Dividing Surds)
	MH52.06	Surds: Simplifying 4 (Sum and Difference)
	MH52.07	Surds: Expanding 1 (Single Bracket)
	MH52.08	Surds: Expanding 2 (Sum/Difference of Single Brackets)
	MH52.09	Surds: Expanding 3 (Double Brackets)
	MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)
	MH52.11	Surds: Expanding 5 (Difference of Two Squares)
Algebraic Expressions	MF17.01	Forming Algebraic Expressions: One Step
	MF17.02	Forming Algebraic Expressions: Two Step
	MF17.03	Algebraic Terminology
	MF17.04	Collecting Like Terms 1: Add and Subtract
	MF17.05	Collecting Like Terms 2: Add and Subtract (Including Squared/Cubed Variables)
	MF17.06	Collecting Like Terms 3: In Context (Perimeter)
	MF17.07	Simplifying Expressions 1: Multiplication
	MF17.08	Simplifying Expressions 2: Multiplication (In Context)
	MF17.09	Simplifying Expressions 3: Division
	MF17.10	Simplifying Expressions 4: Division
	MF17.11	Simplifying Expressions 5: Multiplication and Division

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Strand	Code	Nugget Name
Substitution Into Expressions	MF17.13	Substitution into Expressions 1: One Term
	MF17.14	Substitution into Expressions 2: Two Terms
	MF17.15	Substitution into Expressions 3: Two Terms incl. Squares
	MF17.16	Substitution into Expressions 4: Calculator
Forming & Solving Simple Equations	MF19.18	Generating Equations from Words
	MF19.19	Generating Equations from Diagrams
	MF19.01	Solving Equations: One Step (+ −)
	MF19.02	Solving Equations: One Step (×)
	MF19.03	Solving Equations: One Step (÷)
	MF19.04	Solving Equations: One Step (+ − × ÷)
	MF19.05	Solving Equations: Two Steps (× ÷)
	MF19.06	Solving Equations: Two Steps $ax + b = c$
	MF19.07	Solving Equations: Two Steps $ax - b = c$
	MF19.08	Solving Equations: Two Steps $(x/a) \pm b = c$
	MF19.09	Solving Equations: Two Steps $(x \pm a)/b = c$
	MF19.10	Solving Equations: Two Steps (Unknown as Denominator)
	MF19.11	Solving Equations: Two Steps (Negative Unknown)
	MF19.12	Solving Equations: Two Steps (Mixed Exercise)
Expanding & Factorising	MF18.25	Expanding Single Brackets: Introduction
	MF18.01	Expanding Single Brackets 1: $a(x \pm b)$
	MF18.02	Expanding Single Brackets 2: $\pm a(x \pm b)$
	MF18.03	Expanding Single Brackets 3: $\pm a(\pm bx \pm cy)$

Strand	Code	Nugget Name
Expanding & Factorising	MF18.04	Expanding Single Brackets 4: $\pm x(\pm y \pm a)$
	MF18.05	Expanding Single Brackets 5: Mixed
	MF18.06	Expanding and Simplifying
	MF18.07	Factorising into a Single Bracket 1: $x \pm a$ or $a \pm x$
	MF18.08	Factorising into a Single Bracket 2: $ax \pm bx$
	MF18.09	Factorising into a Single Bracket 3: $axy(bx^2 \pm cx \pm d)$
	MF18.10	Expanding Double Brackets 1: $(x \pm a)(x \pm b)$
	MF18.11	Expanding Double Brackets 2: $(ax \pm b)(cx \pm d)$
	MF18.12	Expanding Double Brackets 3: $(x \pm a)^2$
	MF18.13	Expanding Double Brackets 4: $a(bx \pm c)(dx \pm e)$
	MF18.14	Expanding Double Brackets 5: $a(bx \pm c)^2$
	MH18.18	Expanding Double Brackets 6: $(ax \pm b)(cy \pm d)$
	MF18.15	Factorising Quadratics 1: $(x + a)(x + b)$
	MF18.16	Factorising Quadratics 2: $(x \pm a)(x \pm b)$
	MH18.20	Factorising Quadratics 3: $(ax \pm b)(x \pm c)$
	MH18.21	Factorising Quadratics 4: $(ax \pm b)(x \pm c)$
	MH18.22	Factorising Quadratics 5: $(ax \pm b)(x \pm c)$
	MH18.23	Factorising Quadratics 6: $(ax \pm b)(cx \pm d)$
	MH18.24	Factorising Quadratics 7: $(ax \pm b)(cx \pm d)$
Using Formulae	MF21.01	Generating Formulae
	MF21.02	Substituting into a Formula
	MF21.04	Recalling and Using Formulae 1
	MH21.11	Recalling and Using Formulae 2

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Strand	Code	Nugget Name
Rearranging Formulae	MF21.05	Rearranging Formulae: One Step
	MF21.06	Rearranging Formulae: Two Step
	MF21.07	Rearranging Formulae: Negative Subject
	MF21.08	Rearranging Formulae: Unknown in Denominator
	MF21.09	Rearranging Formulae: With Powers
	MF21.10	Rearranging Formulae: Unknown on Both Sides
Solving Quadratics	MF20.01	Solving Quadratics 1: $x^2 + b = 0$
	MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$
	MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$
	MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)
	MH20.05	The Discriminant
	MH20.06	Quadratic Formula 1: Identify A, B and C
	MH20.07	Quadratic Formula 2: Applying the Formula
	MH20.08	Quadratic Formula 3: Applying the Formula
	MH20.09	Quadratic Formula 4: Give Answer in Form $(p \pm \sqrt{q})/r$
	MH20.10	Quadratic Formula 5: In Context
	MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)
	MH20.12	Solving Quadratics 6: $ax^2 + bx + c = 0$ (a is Not Prime)
	MH20.13	Solving Quadratics 7: Challenge
	MH20.14	Quadratic Simultaneous Equations

Strand	Code	Nugget Name
Arithmetic & Geometric Sequences	MF22.11	Important Sequences: Geometric
	MF22.12	Important Sequences: Fibonacci
	MF22.13	Quadratic Sequences: Using the nth Term
	MH22.14	Subscript Notation
	MH22.15	Unusual Sequences
	MH22.16	Quadratic Sequences 1: $n^2 + c$
	MH22.17	Quadratic Sequences 2: $an^2 + c$
	MH22.18	Quadratic Sequences 3: $an^2 + bn + c$
	MH22.19	Quadratic Sequences 4: $an^2 + bn + c$ and $(an + b)^2$
	MI22.21	Sum of Arithmetic Sequences 1
	MI22.22	Sum of Arithmetic Sequences 2: Reverse
Exponential Equations	MH13.21	Exponential Equations 1: Introduction
	MH13.22	Exponential Equations 2: Quadratics (Changing One Base)
	MH13.23	Exponential Equations 3: Quadratics (Changing Multiple Bases)
	MH13.24	Exponential Equations 4: Challenge
Rationalising the Denominator	MH52.12	Surds: Rationalising 1 (Monomial Denominator)
	MH52.13	Surds: Rationalising 2 (Binomial Denominator)
	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)
	MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)
	MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)

Strand	Code	Nugget Name
y = mx + c	MF23.06	Plotting Straight Line Graphs: 1st Quadrant
	MF23.07	Plotting Straight Line Graphs: 4 Quadrants
	MF23.10	Understanding y = mx + c
	MF23.11	Graphing y = mx + c (1)
	MF23.12	Graphing y = mx + c (2)
Iteration	MH19.27	Iteration 1: Find Solution Between
	MH19.28	Iteration 2: Rearrange Iterative Formula
	MH19.29	Iteration 3: Recursive Iteration
Simultaneous Equations	MF19.20	Simultaneous Equations: Introduction
	MF19.21	Simultaneous Equations 1
	MF19.22	Simultaneous Equations 2: Scale One Equation
	MF19.23	Simultaneous Equations 3: Scale Both Equations
	MF19.24	Simultaneous Equations 4: Rearranging
	MF19.25	Simultaneous Equations: Substitution
	MF19.26	Simultaneous Equations: Worded Questions
Transforming Graphs	MH24.24	Transforming Graphs: Translating Vertical
	MH24.25	Transforming Graphs: Translating Horizontal
	MH24.26	Transforming Graphs: Reflections
	MH24.27	Transforming Graphs: Stretching y-direction
	MH24.28	Transforming Graphs: Stretching x-direction
	MH24.29	Transforming Graphs: Mixed Translations
	MH24.30	Transforming Graphs: Mixed Stretches

Strand	Code	Nugget Name
Transforming Graphs	MH24.31	Transforming Graphs: Mixed
	MH24.32	Transforming Graphs: Combined 1
	MH24.33	Transforming Graphs: Combined 2
Algebraic Fractions	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)
	MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)
	MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)
	MH54.04	Algebraic Fractions 4: Simplify (Binomial Factors)
	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)
	MH54.06	Algebraic Fractions 6: Add and Subtract (Monomial as Denominator)
	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)
	MH54.08	Algebraic Fractions 8: Multiply
	MH54.09	Algebraic Fractions 9: Multiply
	MH54.10	Algebraic Fractions 10: Factorise then Multiply
	MH54.11	Algebraic Fractions 11: Divide
	MH54.12	Algebraic Fractions 12: Solve
	MH54.13	Algebraic Fractions 13: Problem Solving
Trigonometric Functions	MH24.18	Trigonometric Functions: Sin Graph
	MH24.19	Trigonometric Functions: Cos Graph
	MH24.20	Trigonometric Functions: Tan Graph
	MH24.21	Trigonometric Functions: Mixed (Trig Functions)

International Mathematics Course Mapping
Mathematics – MYP

Strand	Code	Nugget Name
Representations of Functions	MF24.07	Plotting Other Polynomial Graphs
	MF24.08	Plotting Reciprocal Graphs
	MH24.23	Plotting Exponential Graphs
	MF24.09	Recognising Key Graphs
Functions	MH56.01	Functions: Key Concept
	MH56.02	Functions: Substitution 1 (Linear Functions)
	MH56.03	Functions: Substitution 2 (Quadratic Functions)
	MH56.04	Functions: Substitution 3 (Challenge)
	MH56.05	Functions: Solving
	MH56.06	Functions: Algebraic
Composite & Inverse Functions	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)
	MH56.08	Composite Functions: Substitution 2 (2 Non-Linear Functions)
	MH56.09	Composite Functions: Substitution 3 (3 Functions)
	MH56.10	Composite Functions: Substitution 4 (Quadratic Functions)
	MH56.11	Composite Functions: Solving
	MH56.12	Composite Functions: Algebraic
	MH56.13	Inverse Functions 1: Linear
	MH56.14	Inverse Functions 2: Non-Linear
	MH56.15	Inverse Functions: Substitution
	MH56.16	Inverse Functions: Solving
	MH56.17	Composite and Inverse Functions

Strand	Code	Nugget Name
Classifying Shapes & Angles	MF26.01	Key Terms in 2D Geometry
	MF26.02	Key Terms in 3D Geometry
	MF26.03	Types of Angles 1: Diagrams
	MF26.04	Types of Angles 2: Numbers
	MF26.06	Naming 2D Shapes
	MF26.07	Types of Triangles 1: Diagrams
	MF26.08	Types of Triangles 2: Words
	MF26.09	Types of Quadrilateral
	MF26.10	Naming 3D Shapes
	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)
	MF26.12	Measuring Angles 2: Angles < 180°
	MF26.13	Measuring Angles 3: Angles > 180°
	MF26.14	Estimating Angles
	MF26.15	Drawing Angles
	MF29.03	Quadrilateral Facts
	MF29.04	Polygon Facts
	MF29.05	Naming the Parts of a Circle
Calculations With Angle Properties	MF27.01	Straight Line Angles 1: Multiples of 5°
	MF27.02	Straight Line Angles 2
	MF27.03	Straight Line Angles with Algebra
	MF27.04	Angles Around a Point 1: Multiples of 5°
	MF27.05	Angles Around a Point 2

International Mathematics Course Mapping
Mathematics – MYP

Strand	Code	Nugget Name
Calculations With Angle Properties	MF27.06	Angles Around a Point with Algebra
	MF27.07	Vertically Opposite Angles
	MF28.01	Angles in a Triangle 1
	MF28.02	Angles in a Triangle 2: Isosceles Triangles
	MF28.03	Angles in a Triangle 3: Including Angles on a Straight Line
	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
	MF28.05	Angles in Quadrilaterals
	MF28.06	Introduction to Angles in Polygons
	MF28.07	Interior Angles 1: Sum of Interior Angles
	MF28.08	Interior Angles 2: Angles in Regular Shapes
	MF28.09	Interior Angles in Irregular Shapes
	MF28.10	Exterior Angles
	MF28.11	Using Multiple Rules with Angles in Polygons
Parallel & Perpendicular Lines	MF27.08	Alternate Angles
	MF27.09	Corresponding Angles
	MF27.10	Co-interior Angles
	MF27.11	Angles in Parallel Lines 1
	MF27.12	Angles in Parallel Lines 2
	MF23.16	Finding Parallel Lines
	MH23.21	Finding Perpendicular Lines 1: Gradient
	MH23.22	Finding Perpendicular Lines 2: Equation

Strand	Code	Nugget Name
Parallel & Perpendicular Lines	MH23.23	Finding Perpendicular Lines 3: Problem Solving
	MH23.24	Equation of a Tangent 1: Circle Given
	MH23.25	Equation of a Tangent 2: Mixed Exercise
Perimeter	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
Area	MF31.01	Area by Counting Squares
	MF31.02	Estimating Area
	MF31.03	Area of Squares, Rectangles and Parallelograms
	MF31.04	Area of Right Angled Triangles
	MF31.05	Area of Triangles
	MF31.06	Area of Composite Shapes 1: Adding
	MF31.07	Area of Trapeziums
	MF31.08	Area of Composite Shapes 2: Subtracting
	MF31.09	Area and Algebra
Circles: Perimeter, Area & Circumference	MF32.01	Circumference: From Radius
	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter

Strand	Code	Nugget Name
Circles: Perimeter, Area & Circumference	MF32.05	Perimeter of Part Circles
	MF32.06	Perimeter of Composite Shapes with Part Circles
	MF32.07	Area of a Circle: From Radius
	MF32.08	Area of a Circle: From Diameter
	MF32.09	Area of a Circle
	MF32.10	Using the Area of a Circle to find the Radius or Diameter
	MF32.11	Areas of Part Circles
	MF32.12	Areas of Composite Shapes with Part Circles
Surface Area & Nets	MF33.02	Nets of Cubes
	MF35.01	Surface Area of Cuboids
	MF35.02	Surface Area of Prisms
	MF35.03	Surface Area of Cylinders
	MF35.04	Surface Area of Part Cylinders
	MF35.05	Surface Area of Spheres
	MF35.06	Surface Area of Cones
	MF35.07	Surface Area of Pyramids
	MF35.08	Surface Area of Composite Solids
	MH35.09	Problem Solving with Surface Area
Coordinates	MF23.01	Understanding Coordinates: 1st Quadrant
	MF23.02	Understanding Coordinates: 4 Quadrants
	MF23.26	Coordinates and 2D Shapes

Strand	Code	Nugget Name
Symmetry & Reflection	MF29.01	Rotational Symmetry
	MF29.02	Reflective Symmetry
	MF33.01	Planes of Symmetry
	MF40.01	Introduction to Reflection
	MF40.02	Finding the Line of Reflection
	MF40.03	Coordinates in Reflection
Metric Conversions	MF36.02	Metric Units
	MF36.03	Estimating with Metric Units
	MF36.04	Converting Metric Length (One Step)
	MF36.05	Converting Metric Length (Multi-Step)
	MF36.06	Converting Metric Length: Worded Questions
	MF36.07	Converting Metric Mass (One Step)
	MF36.08	Converting Metric Mass (Multi-Step)
	MF36.09	Converting Metric Mass: Worded Questions
	MF36.10	Converting Metric Capacity
	MF36.11	Converting Metric Volume 1
	MF36.12	Converting Metric Volume 2
	MF36.16	Metric and Imperial Length (No Calculator)
	MF36.17	Metric and Imperial Length (Calculator)
	MF36.18	Metric and Imperial Mass and Volume (No Calculator)
	MF36.19	Metric and Imperial Mass and Volume (Calculator)

Strand	Code	Nugget Name
Similarity & Congruence	MF29.06	Congruence
	MF29.07	Congruent Triangles
	MF43.01	Introduction to Similarity
	MF43.02	Similar Polygons: Finding the Scale Factor
	MF43.03	Similar Polygons: Missing Sides given Scale Factor
	MF43.04	Similar Polygons: Missing Sides
	MF43.05	Similar Triangles 1: Same Orientation
	MF43.06	Similar Triangles 2: Different Orientations
	MH43.07	Similar Area 1
	MH43.08	Similar Area 2: Including Ratio
	MH43.09	Similar Volume
	MH43.10	Similar Area and Volume
Coordinate Geometry	MF23.03	Midpoint of a Line Segment
	MH23.20	Coordinates and Ratios
	MF23.08	Finding the Gradient of a Line Segment: Using the Graph
	MF23.09	Finding the Gradient of a Line Segment: Using the Formula
	MF23.13	Finding y = mx + c from a Gradient and a Point
	MF23.14	Finding y = mx + c from Two Points
	MF23.15	Rearranging y = mx + c
Isometric Transformations	MF40.04	Translating a Point
	MF40.05	Translating a Shape
	MF40.06	Describing Translations

Strand	Code	Nugget Name
Isometric Transformations	MF40.07	Enlarging Shapes
	MF40.08	Enlargements with 0<SF<1
	MF40.09	Enlargement with Centre (0,0)
	MF40.15	Rotation with Centre (0,0)
	MF40.16	Rotation with Centre (x,y)
	MF40.17	Describing Rotation
	MF40.18	Describing Transformations
	MF40.19	Combination of Transformations 1
	MH40.24	Combination of Transformations 2
	MF40.10	Enlargement with Centre (x,y)
	MF40.11	Enlargement with Fractional Scale Factor (0,0)
	MF40.12	Enlargement with Fractional Scale Factor (x,y)
	MH40.20	Enlargement with Negative Scale Factor
	MH40.21	Enlargement with Negative Fractional Scale Factor
	MH40.22	Enlargement with Mixed Scale Factor
	MF40.13	Describing Enlargements with an Integer Scale Factor
	MF40.14	Describing Enlargements with a Non-Integer Scale Factor
	MH40.23	Describing Enlargements with Mixed Scale Factor
Circle Geometry	MH57.01	Angle in a Semicircle and Angle at Tangent
	MH57.02	Properties of Diameter and Radii
	MH57.03	Tangents from an External Point
	MH57.04	Angles at the Centre

Strand	Code	Nugget Name
Circle Geometry	MH57.05	Angles on the Same Arc
	MH57.06	Angles at the Centre and on the Same Arc
	MH57.07	Cyclic Quadrilaterals
	MH57.08	Alternate Segment Theorem
	MH57.09	Mixed Circle Theorems 1: Practice
	MH57.10	Mixed Circle Theorems 2: Algebra
	MH57.11	Mixed Circle Theorems 3: Two Theorems
	MH57.12	Mixed Circle Theorems 4: Challenge
Volume & Capacity	MF34.01	Counting Cubes
	MF34.02	Volume of Cubes and Cuboids
	MF34.03	Volume of Cubes and Cuboids with Missing Side(s)
	MF34.04	Volume of Prisms 1: Given Area
	MF34.07	Volume of Cylinders
	MF34.08	Volume of Cylinders with a Missing Value
	MF34.09	Volume of Part Cylinders
	MF34.10	Volume of a Sphere
	MF34.11	Volume of a Sphere with the Radius Missing
	MF34.12	Volume of a Cone
	MF34.13	Volume of a Cone with the Radius Missing
	MF34.14	Volume of a Hemisphere
	MF34.15	Volume of Pyramids
	MF34.16	Volume of Composite Solids

Strand	Code	Nugget Name
Volume & Capacity	MH34.17	Problem Solving with Volume
	MH34.18	Volume of Frustums
Bearings	MF39.06	Introduction to Bearings
	MF39.07	Bearings from North
	MF39.08	Finding Bearings 1
	MF39.09	Finding Bearings 2: Using Co-interior Angles
Pythagoras' Theorem	MF44.01	Pythagoras' Theorem
	MF44.02	Pythagoras: Finding the Hypotenuse
	MF44.03	Pythagoras: Finding a Short Side
	MF44.04	Pythagoras: Mixed Sides
	MF44.05	Pythagoras: Using Coordinates
	MF44.06	Pythagoras: Worded Questions
	MF44.07	Pythagoras: Applied Questions
	MH59.01	3D Pythagoras 1: Cuboids
	MH59.02	3D Pythagoras 2: Pyramids and Cylinders
Trigonometric Ratios in Right-Angled Triangles	MF45.01	Introduction to SOHCAHTOA
	MF45.02	Trigonometry: Using a Calculator
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)
	MF45.05	Trigonometry: Missing Angle
	MF45.06	Trigonometry: Worded Questions

Strand	Code	Nugget Name
Trigonometric Ratios in Right-Angled Triangles	MF45.07	Exact Trigonometric Values
	MF45.08	Trigonometry and Pythagoras
	MH59.03	3D SOH CAH TOA
	MH59.04	3D Trigonometry
	MH59.05	3D Trigonometry: Problem Solving
Sine Rule & Cosine Rule	MH58.05	Sine Rule: Proof
	MH58.06	Sine Rule: Sides
	MH58.07	Sine Rule: Angles
	MH58.08	Sine Rule: Applied
	MH58.09	Cosine Rule: Proof
	MH58.10	Cosine Rule: Finding a
	MH58.11	Cosine Rule: Finding A
	MH58.12	Cosine Rule: Applied
	MH58.13	Choosing the Correct Trigonometric Rule
	MH58.14	Mixed Trigonometry 1
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems
	MH58.17	Mixed Trigonometry 4: Non-Calculator
	MH58.18	Mixed Trigonometry 5: Bearings
Arc Length & Sector	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MH32.17	Arc Length 3: Reverse

Strand	Code	Nugget Name
Arc Length & Sector	MF32.15	Area of a Sector 1
	MH32.18	Area of a Sector 2: Reverse
Vectors	MF41.01	Column Vectors
	MF41.02	Column Vectors: Scalar Multiplication
	MF41.03	Column Vectors: Addition and Subtraction
	MF41.04	Column Vectors: Drawing
	MF41.05	Geometric Vectors 1: One Term
	MF41.06	Geometric Vectors 2: Two Terms
	MH41.07	Geometric Vectors 3: Within Shapes
	MH41.08	Geometric Vectors 4: Expand and Simplify
	MH41.09	Geometric Vectors 5: Midpoints
	MH41.10	Geometric Vectors 6: Ratios
	MH41.11	Geometric Vectors 7: Fractions and Ratios
	MH41.12	Geometric Vectors 8: Parallel Vectors
	MH41.13	Geometric Vectors 9: Proof
Area of a Triangle Rule	MH58.01	Area using 1/2(ab)sin(C): Proof
	MH58.02	1/2(ab)sin(C): Finding the area
	MH58.03	1/2(ab)sin(C): Area with Missing Value
	MH58.04	1/2(ab)sin(C): Applied

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Strand	Code	Nugget Name
Graphical Representations	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
	MF48.03	Tally Chart
	MF48.04	Questionnaires
	MF48.07	Grouped Tally Charts: Discrete and Continuous
	MF50.03	Pictograms
	MF50.04	Bar Charts
	MF50.05	Multiple and Composite Bar Charts
	MF50.06	Vertical Line Graphs
	MF50.07	Creating Stem and Leaf Diagrams
	MF50.08	Interpreting Stem and Leaf Diagrams
	MF50.09	Creating Pie Charts (No Calculator)
	MF50.10	Creating Pie Charts (Calculator)
	MF50.11	Interpreting Pie Charts
	MF50.01	Completing Two Way Tables
	MF50.02	Interpreting Two Way Tables
	MF50.12	Time Series Graphs
Mean, Median, Mode & Range	MF49.01	Mode
	MF49.02	Median
	MF49.03	Mean 1: Positive Integers
	MF49.04	Mean 2: Decimals and Negatives
	MF49.05	Mean 3: Finding Missing Values

Strand	Code	Nugget Name
Mean, Median, Mode & Range	MF49.06	Mean 4: Changing Means
	MF49.07	Range 1: Positive Integers
	MF49.08	Range 2: Decimals and Negatives
	MF49.09	Applying Averages and the Range 1: Raw Data
	MF49.10	Mode from Frequency Table
	MF49.11	Median from Frequency Table
	MF49.12	Mean from Frequency Table
	MF49.13	Range from Frequency Table
	MF49.14	Modal Class from Grouped Frequency Table
	MF49.15	Median from Grouped Frequency Table
	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data
	MF49.18	Range from Grouped Frequency Table
	MF49.19	Applying Averages and the Range 2: Tables
Probability	MF46.01	Probability Scale in Words
	MF46.02	Probability Scale in Numbers
	MF46.03	Calculating Probability
	MF46.05	Two Way Tables: Probability
	MF46.06	Listing Outcomes
	MH46.18	Product Rule for Counting
	MF46.07	Sample Spaces
	MF46.09	Expected Frequency

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Strand	Code	Nugget Name
Probability	MF46.10	Frequency Trees
	MF46.11	Interpreting Frequency Trees
	MF46.12	Multiplication Law of Probability (AND)
	MF46.13	Addition Law of Probability (OR)
Sampling Techniques	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples
Scatter Graphs	MF50.13	Drawing Scatter Graphs
	MF50.14	Interpreting Scatter Graphs 1: Introduction
	MF50.15	Interpreting Scatter Graphs 2: Outliers
Cumulative Frequency & Box Plots	MH60.01	Cumulative Frequency 1: Calculating
	MH60.02	Cumulative Frequency 2: Drawing
	MH60.03	Cumulative Frequency 3: Calculating Frequency
	MH60.04	Cumulative Frequency 4: Finding Values
	MH60.05	Cumulative Frequency 5: Median
	MH60.06	Cumulative Frequency 6: Quartiles
	MH60.07	Cumulative Frequency 7: Interquartile Range
	MH60.08	Cumulative Frequency 8: Plot and Evaluate
	MI60.15	Cumulative Frequency 9: Percentiles
	MH60.09	Box Plots 1: Interpret
	MH60.10	Box Plots 2: Finding Values to Plot

Strand	Code	Nugget Name
Cumulative Frequency & Box Plots	MH60.11	Box Plots 3: Draw from List
	MH60.12	Box Plots 4: Draw from Data
	MH60.13	Box Plots 5: Evaluate and Compare
	MH60.14	Cumulative Frequency and Box Plots
Sets & Venn Diagrams	MF46.04	Mutually Exclusive Events
	MF47.01	Set Notation
	MF47.02	Elements in a Set 1: Identifying Elements
	MF47.03	Elements in a Set 2: Unions and Intersections
	MF47.04	Elements in a Set 3: Complements
	MF47.05	Introduction to Venn Diagrams
	MF47.06	Constructing Venn Diagrams 1: Listing Elements
	MF47.07	Constructing Venn Diagrams 2: Writing Values
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)
	MH47.14	Venn Diagrams: Complements
	MH47.15	Venn Diagrams with Algebra
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)
	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)

International Mathematics Course Mapping
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Strand	Code	Nugget Name
Sets & Venn Diagrams	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)
Tree Diagrams	MF46.14	Tree Diagrams 1: Completing Diagrams
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)
	MH46.22	Tree Diagrams 7: NOT Statements
	MH46.23	Tree Diagrams 8: Reverse
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)
	MH46.25	Tree Diagrams 10: Conditional Probability (Multiple Outcomes)
	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)
	MH46.27	Tree Diagrams 12: Algebraic Expressions
	MH46.28	Tree Diagrams 13: Solving Equations
Histograms & Frequency Polygons	MH61.01	Frequency Density 1: Calculating
	MH61.02	Frequency Density 2: Problem Solving
	MH61.03	Histograms 1: Choosing Axes
	MH61.04	Histograms 2: Plotting
	MH61.05	Histograms 3: Calculating Frequency

Strand	Code	Nugget Name
Histograms & Frequency Polygons	MH61.06	Histograms 4: Calculating Frequency within a Given Range
	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)
	MH61.08	Histograms 6: Finding Fractions and Percentages
	MF50.16	Frequency Polygons: Drawing
	MF50.17	Frequency Polygons: Interpreting
	MH61.09	Histograms 7: Finding Proportions
	MH61.10	Histograms 8: Median
	MH61.11	Histograms 9: Mean
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)

International Mathematics Course Mapping
Mathematics – MYP

Course Content
Mathematics - Bridge to DP

Diagnostics 10   **Strands** 35   **Nuggets** 433

This is an advanced mathematics course covering all key secondary concepts and transition material to bridge the gap between MYP and IBDP. Suitable for students who are preparing to tackle IBDP Mathematics.

Strands

A strand is a sequence of nuggets grouped by theme or topic, forming a high-level organisation of content within a course.

Strand	Nuggets
Diagnostics	10
Rounding	1
Percentages Calculator	6
Powers and Roots	6
Surds	16
Indices	23
Introduction to Algebra	7
Expanding and Factorising	17
Solving Linear Equations	14
Solving Quadratic Equations	14
Completing the Square	9
Algebraic Fractions	13
Formulae	9

Strand	Nuggets
Algebraic Proof	4
Functions	19
Sequences	16
Straight Line Graphs	22
Quadratic and Other Graphs	34
Inequalities	16
Circles	7
Compound Measure	9
Scale Drawings and Bearings	4
Circle Theorems	16
Vectors	14
Pythagoras	7
Right-Angled Trigonometry	10
Advanced Trigonometry	18
3D Trigonometry	5
Probability	17
Sets and Venn Diagrams	23
Collecting Data	4
Analysing Data	2
Cumulative Frequency and Box Plots	15
Histograms	12
Physics for Maths	13
Calculus	11

Nuggets

A nugget is a micro-lesson that contains learning material followed by questions to assess learning.

Strands	Code	Nugget Name
Diagnostics	BR0.01	Diagnostic 1: Essentials
	BR0.02	Diagnostic 2: Essentials
	BR0.03	Diagnostic 3
	BR0.04	Diagnostic 4
	BR0.05	Diagnostic 5: Physics for Mechanics
	BR0.06	Diagnostic 6
	BR0.07	Diagnostic 7
	BR0.08	Diagnostic 8
	BR0.09	Diagnostic 9
	BR0.10	Diagnostic 10
Rounding	MF9.15	Bounds 3: Intervals
Percentages Calculator	MF11.07	Compound Interest (Calculator)
	MF11.08	Depreciation (Calculator)
	MF11.09	Compound Interest and Depreciation (Calculator)
	MH11.14	Exponential Growth
	MH11.15	Exponential Decay
	MH11.16	Exponential Growth and Decay

Strands	Code	Nugget Name
Powers and Roots	MF12.01	Squares
	MF12.02	Cubes
	MF12.03	Squaring and Cubing Negatives
	MF12.04	Powers
	MF12.05	Roots of Squares and Cubes
	MF12.06	Roots
Surds	MH52.01	Surds: Introduction
	MH52.02	Surds: Multiplication and Division
	MH52.03	Surds: Simplifying 1
	MH52.04	Surds: Simplifying 2 (Products of Surds)
	MH52.05	Surds: Simplifying 3 (Dividing Surds)
	MH52.06	Surds: Simplifying 4 (Sum and Difference)
	MH52.07	Surds: Expanding 1 (Single Bracket)
	MH52.08	Surds: Expanding 2 (Sum/Difference of Single Brackets)
	MH52.09	Surds: Expanding 3 (Double Brackets)
	MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)
	MH52.11	Surds: Expanding 5 (Difference of Two Squares)
	MH52.12	Surds: Rationalising 1 (Monomial Denominator)
	MH52.13	Surds: Rationalising 2 (Binomial Denominator)
	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)
	MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)
	MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)

Strands	Code	Nugget Name
Indices	MF13.01	Powers of 0 and 1
	MF13.02	Raising a Fraction to a Power
	MF13.03	Multiplying Indices
	MF13.04	Dividing Indices
	MF13.05	Power of a Power
	MF13.06	Negative Indices
	MF13.07	Combination of Indices
	MH13.08	Fractional Indices 1: Square and Cube Root
	MH13.09	Fractional Indices 2: Non-Unit Fraction
	MH13.10	Fractional Indices 3: Negative Unit Fractions
	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions
	MH13.12	Fractional Indices 5: Fraction Base
	MH13.14	Solving Problems with Indices 1: Combination of Rules
	MH13.15	Solving Problems with Indices 2: Combination of Rules
	MH13.16	Solving Problems with Indices 3: Working Backwards
	MH13.17	Solving Problems with Indices 4: Solving Equations
	MH13.18	Solving Problems with Indices 5: Including Square/Cube Root Form
	MH13.19	Solving Problems with Indices 6: Challenge
	MH13.20	Solving Problems with Indices 7: Challenge
	MH13.21	Exponential Equations 1: Introduction
	MH13.22	Exponential Equations 2: Quadratics (Changing One Base)
	MH13.23	Exponential Equations 3: Quadratics (Changing Multiple Bases)
	MH13.24	Exponential Equations 4: Challenge

Strands	Code	Nugget Name
Introduction to Algebra	MF17.07	Simplifying Expressions 1: Multiplication
	MF17.08	Simplifying Expressions 2: Multiplication (In Context)
	MF17.09	Simplifying Expressions 3: Division
	MF17.10	Simplifying Expressions 4: Division
	MF17.11	Simplifying Expressions 5: Multiplication and Division
	MH17.17	Simplifying Expressions 6: Index Laws
	MH17.18	Simplifying Expressions 7: Index Laws
Expanding and Factorising	MF18.05	Expanding Single Brackets 5: Mixed
	MF18.06	Expanding and Simplifying
	MF18.10	Expanding Double Brackets 1: $(x \pm a)(x \pm b)$
	MF18.11	Expanding Double Brackets 2: $(ax \pm b)(cx \pm d)$
	MF18.12	Expanding Double Brackets 3: $(x \pm a)^2$
	MF18.13	Expanding Double Brackets 4: $a(bx \pm c)(dx \pm e)$
	MF18.14	Expanding Double Brackets 5: $a(bx \pm c)^2$
	MH18.18	Expanding Double Brackets 6: $(ax \pm b)(cy \pm d)$
	MH18.19	Expanding More Brackets
	MF18.15	Factorising Quadratics 1: $(x + a)(x + b)$
	MF18.16	Factorising Quadratics 2: $(x \pm a)(x \pm b)$
	MH18.20	Factorising Quadratics 3: $(ax \pm b)(x \pm c)$
	MH18.21	Factorising Quadratics 4: $(ax \pm b)(x \pm c)$
	MH18.22	Factorising Quadratics 5: $(ax \pm b)(x \pm c)$
	MH18.23	Factorising Quadratics 6: $(ax \pm b)(cx \pm d)$
	MH18.24	Factorising Quadratics 7: $(ax \pm b)(cx \pm d)$
	MF18.17	The Difference of Two Squares

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Strands	Code	Nugget Name
Solving Linear Equations	MF19.13	Solving Equations: Three Steps (Unknown on One Side)
	MF19.14	Solving Equations: Three Steps (Including Brackets)
	MF19.15	Solving Equations: Three Steps (Unknown on Both Sides)
	MF19.16	Solving Equations: Four Steps (Including Expanding)
	MF19.17	Solving Equations: Four Steps (Including Fractions)
	MF19.20	Simultaneous Equations: Introduction
	MF19.21	Simultaneous Equations 1
	MF19.22	Simultaneous Equations 2: Scale One Equation
	MF19.23	Simultaneous Equations 3: Scale Both Equations
	MF19.24	Simultaneous Equations 4: Rearranging
	MF19.25	Simultaneous Equations: Substitution
	MH19.27	Iteration 1: Find Solution Between
	MH19.28	Iteration 2: Rearrange Iterative Formula
	MH19.29	Iteration 3: Recursive Iteration
Solving Quadratic Equations	MF20.01	Solving Quadratics 1: $x^2 + b = 0$
	MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$
	MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$
	MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)
	MH20.05	The Discriminant
	MH20.06	Quadratic Formula 1: Identify A, B and C
	MH20.07	Quadratic Formula 2: Applying the Formula
	MH20.08	Quadratic Formula 3: Applying the Formula

Strands	Code	Nugget Name
Solving Quadratic Equations	MH20.09	Quadratic Formula 4: Give Answer in Form $(p \pm \sqrt{q})/r$
	MH20.10	Quadratic Formula 5: In Context
	MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)
	MH20.12	Solving Quadratics 6: $ax^2 + bx + c = 0$ (a is Not Prime)
	MH20.13	Solving Quadratics 7: Challenge
	MH20.14	Quadratic Simultaneous Equations
Completing the Square	MH53.01	Completing the Square 1: $(x + q)^2 + r$
	MH53.02	Completing the Square 2: $(x + q/2)^2 + r$
	MH53.03	Completing the Square 3: $p(x + q)^2 + r$
	MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$
	MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$
	MH53.06	Completing the Square to Solve Equations 2: $x^2 + bx + c$ (Including Fractions)
	MH53.07	Completing the Square to Solve Equations 3: $ax^2 + bx + c$
	MH53.08	Completing the Square to Solve Equations 4: Mixed Exercise
	MH53.09	Completing the Square: Turning Points
Algebraic Fractions	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)
	MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)
	MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)
	MH54.04	Algebraic Fractions 4: Simplify (Binomial Factors)
	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)
	MH54.06	Algebraic Fractions 6: Add and Subtract (Monomial as Denominator)
	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)

Strands	Code	Nugget Name
Algebraic Fractions	MH54.08	Algebraic Fractions 8: Multiply
	MH54.09	Algebraic Fractions 9: Multiply
	MH54.10	Algebraic Fractions 10: Factorise then Multiply
	MH54.11	Algebraic Fractions 11: Divide
	MH54.12	Algebraic Fractions 12: Solve
	MH54.13	Algebraic Fractions 13: Problem Solving
Formulae	MF21.03	Using Kinematics
	MF21.04	Recalling and Using Formulae 1
	MH21.11	Recalling and Using Formulae 2
	MF21.05	Rearranging Formulae: One Step
	MF21.06	Rearranging Formulae: Two Step
	MF21.07	Rearranging Formulae: Negative Subject
	MF21.08	Rearranging Formulae: Unknown in Denominator
	MF21.09	Rearranging Formulae: With Powers
	MF21.10	Rearranging Formulae: Unknown on Both Sides
Algebraic Proof	MH55.01	Introduction to Algebraic Proof
	MH55.02	Algebraic Proof 1: Complete the Proof
	MH55.03	Algebraic Proof 2
	MH55.04	Algebraic Proof: Disproving by Example
Functions	MH56.01	Functions: Key Concept
	MI56.18	Functions: Domain
	MI56.19	Functions: Range

Strands	Code	Nugget Name
Functions	MH56.02	Functions: Substitution 1 (Linear Functions)
	MH56.03	Functions: Substitution 2 (Quadratic Functions)
	MH56.04	Functions: Substitution 3 (Challenge)
	MH56.05	Functions: Solving
	MH56.06	Functions: Algebraic
	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)
	MH56.08	Composite Functions: Substitution 2 (2 Non-Linear Functions)
	MH56.09	Composite Functions: Substitution 3 (3 Functions)
	MH56.10	Composite Functions: Substitution 4 (Quadratic Functions)
	MH56.11	Composite Functions: Solving
	MH56.12	Composite Functions: Algebraic
	MH56.13	Inverse Functions 1: Linear
	MH56.14	Inverse Functions 2: Non-Linear
	MH56.15	Inverse Functions: Substitution
	MH56.16	Inverse Functions: Solving
	MH56.17	Composite and Inverse Functions
Sequences	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
	MI22.20	Sequences: $a + (n - 1)d$
	MF22.07	Linear Sequences: Finding the nth Term 1 (Increasing)
	MF22.08	Linear Sequences: Finding the nth Term 2 (Decreasing)
	MI22.21	Sum of Arithmetic Sequences 1

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Strands	Code	Nugget Name
Sequences	MI22.22	Sum of Arithmetic Sequences 2: Reverse
	MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
	MF22.11	Important Sequences: Geometric
	MF22.13	Quadratic Sequences: Using the nth Term
	MH22.14	Subscript Notation
	MH22.15	Unusual Sequences
	MH22.16	Quadratic Sequences 1: $n^2 + c$
	MH22.17	Quadratic Sequences 2: $an^2 + c$
	MH22.18	Quadratic Sequences 3: $an^2 + bn + c$
	MH22.19	Quadratic Sequences 4: $an^2 + bn + c$ and $(an + b)^2$
Straight Line Graphs	MH23.20	Coordinates and Ratios
	MF23.04	Horizontal and Vertical Graphs
	MF23.05	Other Important Linear Graphs
	MF23.06	Plotting Straight Line Graphs: 1st Quadrant
	MF23.07	Plotting Straight Line Graphs: 4 Quadrants
	MF23.08	Finding the Gradient of a Line Segment: Using the Graph
	MF23.09	Finding the Gradient of a Line Segment: Using the Formula
	MF23.10	Understanding $y = mx + c$
	MF23.11	Graphing $y = mx + c$ (1)
	MF23.12	Graphing $y = mx + c$ (2)
	MF23.13	Finding $y = mx + c$ from a Gradient and a Point
	MF23.14	Finding $y = mx + c$ from Two Points

Strands	Code	Nugget Name
Straight Line Graphs	MF23.15	Rearranging $y = mx + c$
	MF23.16	Finding Parallel Lines
	MH23.21	Finding Perpendicular Lines 1: Gradient
	MH23.22	Finding Perpendicular Lines 2: Equation
	MH23.23	Finding Perpendicular Lines 3: Problem Solving
	MH23.24	Equation of a Tangent 1: Circle Given
	MH23.25	Equation of a Tangent 2: Mixed Exercise
	MF23.17	Solving Using Straight Line Graphs
	MF23.18	Solving Simultaneous Equations Using Straight Line Graphs 1: Graphs Given
	MF23.19	Solving Simultaneous Equations Using Straight Line Graphs 2: Graphs Not Given
Quadratic and Other Graphs	MF24.01	Plotting Simple Quadratic Graphs 1: $y = ax^2 + c$
	MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$
	MF24.03	Quadratic Graphs: Finding the y-intercept
	MF24.04	Quadratic Graphs: Finding the Line of Symmetry
	MF24.05	Quadratic Graphs: Finding the Turning Point
	MF24.06	Quadratic Graphs: Finding the Roots
	MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given
	MH24.14	Quadratic Graphs: Turning Point from Completing Square 2: $y = (x + q)^2 + r$ Not Given
	MH24.15	Quadratic Graphs: Turning Point from Completing Square 3: $y = \pm p(x + q)^2 + r$ Not Given
	MH24.16	Estimating Gradients
	MH24.17	Exponential Functions
	MH24.18	Trigonometric Functions: Sin Graph

Strands	Code	Nugget Name
Quadratic and Other Graphs	MH24.19	Trigonometric Functions: Cos Graph
	MH24.20	Trigonometric Functions: Tan Graph
	MH24.21	Trigonometric Functions: Mixed (Trig Functions)
	MH24.22	Equations of Circles
	MF24.07	Plotting Other Polynomial Graphs
	MF24.08	Plotting Reciprocal Graphs
	MH24.23	Plotting Exponential Graphs
	MF24.09	Recognising Key Graphs
	MF24.10	Approximate Solutions Using a Graph
	MH24.24	Transforming Graphs: Translating Vertical
	MH24.25	Transforming Graphs: Translating Horizontal
	MH24.26	Transforming Graphs: Reflections
	MH24.27	Transforming Graphs: Stretching y-direction
	MH24.28	Transforming Graphs: Stretching x-direction
	MH24.29	Transforming Graphs: Mixed Translations
	MH24.30	Transforming Graphs: Mixed Stretches
	MH24.31	Transforming Graphs: Mixed
	MH24.32	Transforming Graphs: Combined 1
	MH24.33	Transforming Graphs: Combined 2
	MH24.34	Areas under Graphs
	MH24.35	Quadratic Simultaneous Equations Graphically
	MH24.36	Polynomial Simultaneous Equations Graphically

Strands	Code	Nugget Name
Inequalities	MH25.13	Solving Quadratic Inequalities Graphically
	MF25.08	Solving Inequalities: Two Step
	MF25.09	Solving Inequalities: One Step and Two Sided
	MF25.10	Solving Inequalities: Multi Step and Two Sided
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides
	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line
	MH25.14	Solving Inequalities: Quadratics 1
	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)
	MH25.16	Solving Inequalities: Quadratics 3 (Factorising)
	MH25.17	Solving Multiple Linear Inequalities
	MH25.18	Regions 1: One Vertical/Horizontal Line
	MH25.19	Regions 2: One Line of Form y = mx + c
	MH25.20	Regions 3: Multiple Vertical/Horizontal Lines
	MH25.21	Regions 4: Multiple Lines of Form y = mx + c
	MI25.22	Linear Programming 1: Constructing Inequalities
	MI25.23	Linear Programming 2: Shading and Interpreting
Circles	MF32.13	Arc Length 1: Fractions
	MF32.14	Arc Length 2: Degrees
	MH32.17	Arc Length 3: Reverse
	MF32.15	Area of a Sector 1
	MH32.18	Area of a Sector 2: Reverse
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving

Strands	Code	Nugget Name
Compound Measure	MF38.07	Speed, Distance and Time: Mixed Questions
	MF38.08	Converting Units with Speed, Distance and Time
	MF38.19	Distance-Time Graphs: Drawing
	MF38.20	Distance-Time Graphs: Interpreting
	MF38.21	Distance-Time Graphs: Speed
	MH38.22	Velocity-Time Graph: Interpreting
	MH38.23	Velocity-Time Graph: Distance
	MH38.24	Velocity-Time Graph: Acceleration
	MH38.25	Velocity-Time Graph: Problem Solving
Scale Drawings and Bearings	MF39.06	Introduction to Bearings
	MF39.07	Bearings from North
	MF39.08	Finding Bearings 1
	MF39.09	Finding Bearings 2: Using Co-interior Angles
Circle Theorems	MH57.01	Angle in a Semicircle and Angle at Tangent
	MH57.02	Properties of Diameter and Radii
	MH57.03	Tangents from an External Point
	MH57.04	Angles at the Centre
	MH57.05	Angles on the Same Arc
	MH57.06	Angles at the Centre and on the Same Arc
	MH57.07	Cyclic Quadrilaterals
	MH57.08	Alternate Segment Theorem
	MI57.13	Intersecting Chord Theorem

Strands	Code	Nugget Name
Circle Theorems	MI57.14	Intersecting Secant Theorem
	MH57.09	Mixed Circle Theorems 1: Practice
	MH57.10	Mixed Circle Theorems 2: Algebra
	MH57.11	Mixed Circle Theorems 3: Two Theorems
	MH57.12	Mixed Circle Theorems 4: Challenge
	MI57.15	Mixed Circle Theorems 5: Including Chord and Secant Theorems
	MI57.16	Mixed Circle Theorems 6: Challenge incl. Chord and Secant Theorems
Vectors	MF41.01	Column Vectors
	MF41.02	Column Vectors: Scalar Multiplication
	MF41.03	Column Vectors: Addition and Subtraction
	MF41.04	Column Vectors: Drawing
	MI41.14	Magnitude of Vectors
	MF41.05	Geometric Vectors 1: One Term
	MF41.06	Geometric Vectors 2: Two Terms
	MH41.07	Geometric Vectors 3: Within Shapes
	MH41.08	Geometric Vectors 4: Expand and Simplify
	MH41.09	Geometric Vectors 5: Midpoints
	MH41.10	Geometric Vectors 6: Ratios
	MH41.11	Geometric Vectors 7: Fractions and Ratios
	MH41.12	Geometric Vectors 8: Parallel Vectors
	MH41.13	Geometric Vectors 9: Proof

Strands	Code	Nugget Name
Pythagoras	MF44.01	Pythagoras' Theorem
	MF44.02	Pythagoras: Finding the Hypotenuse
	MF44.03	Pythagoras: Finding a Short Side
	MF44.04	Pythagoras: Mixed Sides
	MF44.05	Pythagoras: Using Coordinates
	MF44.06	Pythagoras: Worded Questions
	MF44.07	Pythagoras: Applied Questions
Right-Angled Trigonometry	MF45.01	Introduction to SOHCAHTOA
	MF45.02	Trigonometry: Using a Calculator
	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)
	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)
	MF45.05	Trigonometry: Missing Angle
	MF45.06	Trigonometry: Worded Questions
	MF45.07	Exact Trigonometric Values
	MF45.08	Trigonometry and Pythagoras
	MI45.09	Shortest Distance
	MI45.10	Simple Trigonometric Equations
Advanced Trigonometry	MH58.01	Area using 1/2(ab)sin(C): Proof
	MH58.02	1/2(ab)sin(C): Finding the area
	MH58.03	1/2(ab)sin(C): Area with Missing Value
	MH58.04	1/2(ab)sin(C): Applied
	MH58.05	Sine Rule: Proof

Strands	Code	Nugget Name
Advanced Trigonometry	MH58.06	Sine Rule: Sides
	MH58.07	Sine Rule: Angles
	MH58.08	Sine Rule: Applied
	MH58.09	Cosine Rule: Proof
	MH58.10	Cosine Rule: Finding a
	MH58.11	Cosine Rule: Finding A
	MH58.12	Cosine Rule: Applied
	MH58.13	Choosing the Correct Trigonometric Rule
	MH58.14	Mixed Trigonometry 1
	MH58.15	Mixed Trigonometry 2: Multi-Step Problems
	MH58.16	Mixed Trigonometry 3: Multi-Step Problems
	MH58.17	Mixed Trigonometry 4: Non-Calculator
	MH58.18	Mixed Trigonometry 5: Bearings
3D Trigonometry	MH59.01	3D Pythagoras 1: Cuboids
	MH59.02	3D Pythagoras 2: Pyramids and Cylinders
	MH59.03	3D SOH CAH TOA
	MH59.04	3D Trigonometry
	MH59.05	3D Trigonometry: Problem Solving
Probability	MF46.04	Mutually Exclusive Events
	MF46.12	Multiplication Law of Probability (AND)
	MF46.13	Addition Law of Probability (OR)
	MH46.19	Addition Law of Probability (General OR)

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CENTURY

Strands	Code	Nugget Name
Probability	MF46.14	Tree Diagrams 1: Completing Diagrams
	MF46.15	Tree Diagrams 2: Calculating Probability of Single Outcome
	MF46.16	Tree Diagrams 3: Calculating Probability of Multiple Outcomes
	MF46.17	Tree Diagrams 4: AND/OR Statements (2 Branch Trees)
	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)
	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)
	MH46.22	Tree Diagrams 7: NOT Statements
	MH46.23	Tree Diagrams 8: Reverse
	MH46.24	Tree Diagrams 9: Conditional Probability (Single Outcome)
	MH46.25	Tree Diagrams 10: Conditional Probability (Multiple Outcomes)
	MH46.26	Tree Diagrams 11: Conditional Probability (Problem Solving)
	MH46.27	Tree Diagrams 12: Algebraic Expressions
	MH46.28	Tree Diagrams 13: Solving Equations
Sets and Venn Diagrams	MF47.01	Set Notation
	MF47.02	Elements in a Set 1: Identifying Elements
	MF47.03	Elements in a Set 2: Unions and Intersections
	MF47.04	Elements in a Set 3: Complements
	MI47.25	Subsets: Introduction
	MI47.23	Subsets: Proper Subsets
	MI47.24	Subsets: Problem Solving
	MF47.05	Introduction to Venn Diagrams
	MF47.06	Constructing Venn Diagrams 1: Listing Elements

Strands	Code	Nugget Name
Sets and Venn Diagrams	MF47.07	Constructing Venn Diagrams 2: Writing Values
	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)
	MH47.14	Venn Diagrams: Complements
	MH47.15	Venn Diagrams with Algebra
	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)
	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation)
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)
Collecting Data	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples
Analysing Data	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data

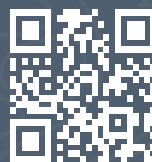| Strands	Code	Nugget Name
Cumulative Frequency and Box Plots	MH60.01	Cumulative Frequency 1: Calculating
	MH60.02	Cumulative Frequency 2: Drawing
	MH60.03	Cumulative Frequency 3: Calculating Frequency
	MH60.04	Cumulative Frequency 4: Finding Values
	MH60.05	Cumulative Frequency 5: Median
	MH60.06	Cumulative Frequency 6: Quartiles
	MH60.07	Cumulative Frequency 7: Interquartile Range
	MH60.08	Cumulative Frequency 8: Plot and Evaluate
	MI60.15	Cumulative Frequency 9: Percentiles
	MH60.09	Box Plots 1: Interpret
	MH60.10	Box Plots 2: Finding Values to Plot
	MH60.11	Box Plots 3: Draw from List
	MH60.12	Box Plots 4: Draw from Data
	MH60.13	Box Plots 5: Evaluate and Compare
	MH60.14	Cumulative Frequency and Box Plots
Histograms	MH61.01	Frequency Density 1: Calculating
	MH61.02	Frequency Density 2: Problem Solving
	MH61.03	Histograms 1: Choosing Axes
	MH61.04	Histograms 2: Plotting
	MH61.05	Histograms 3: Calculating Frequency
	MH61.06	Histograms 4: Calculating Frequency within a Given Range
	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)

Strands	Code	Nugget Name
Histograms	MH61.08	Histograms 6: Finding Fractions and Percentages
	MH61.09	Histograms 7: Finding Proportions
	MH61.10	Histograms 8: Median
	MH61.11	Histograms 9: Mean
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)
Physics for Maths	PHH3.01	Forces Between Objects: Forces, Vectors and Scalars
	PHH3.02	Weight, Mass and Gravitational Field Strength
	PHH3.03	Resultant Forces & Free Body Diagrams
	PHH3.08	Moments and Equilibrium
	PHH3.09	Moments: Levers
	PHH4.01	Speed and Velocity
	PHH4.02	Acceleration and Deceleration
	PHH4.03	Motion Graphs: Distance-Time Graphs
	PHH4.04	Motion Graphs: Velocity-Time Graphs
	PHH4.05	Motion Graphs: Enclosed Areas and Tangents
	PHH4.07	Forces Between Objects: Newton's Third Law
	PHH4.08	Forces & Motion: Newton's Second Law and Inertial Mass
	PHH4.09	Forces & Motion: Momentum & Collisions
Calculus	MI62.01	Differentiating Functions 1: Single Term
	MI62.02	Differentiating Functions 2: Multiple Terms
	MI62.03	Differentiating Functions 3: Negative Powers
	MI62.04	Differentiating Functions 4: Involving Expanding

Strands	Code	Nugget Name
Calculus	MI62.05	Differentiating Functions: Gradient at a Point 1
	MI62.06	Differentiating Functions: Gradient at a Point 2
	MI62.07	Differentiating Functions: Turning Points 1
	MI62.08	Differentiating Functions: Turning Points 2
	MI62.09	Differentiating Functions: Problem Solving
	MI62.10	Differentiating Functions: Kinematics
	MI62.11	Differentiating Functions: Second Derivative

Questions?
Email support@century.tech

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