# **Course Mapping Guide International Mathematics**



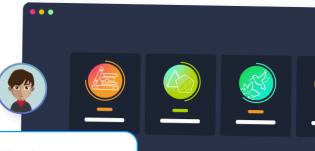
**About CENTURY** 

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?**





## **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.





# **Course Overview**

### **International Mathematics**





## **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 White Rose Map Year 2 National Curriculum Map

Primary – Year 3 Mathematics

Diagnostics 9 Strands 11 Nuggets 131 Year 3 White Rose Map **Year 3 National Curriculum Map** 

Primary – Year 4 Mathematics

Diagnostics 10 Strands 12

Diagnostics 10 Strands 12

Year 4 National Curriculum Map Year 4 White Rose Map

Nuggets 206

Nuggets 206

Primary – Year 5 Mathematics

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

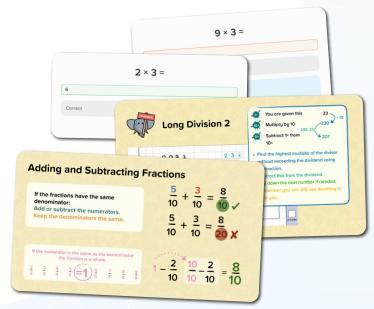
Diagnostics 1 Strands 6 Nuggets 52

View course content

Primary – Year 5-6 Arithmetic

Diagnostics 8 Strands 9 Nuggets 60

View course content





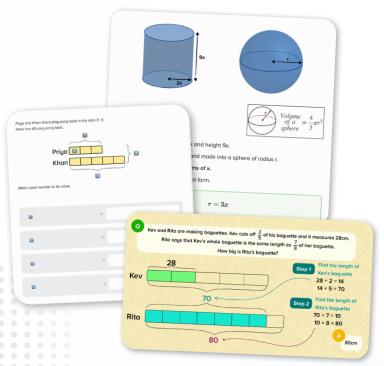
## **Course List**

## **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) Edugas: 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

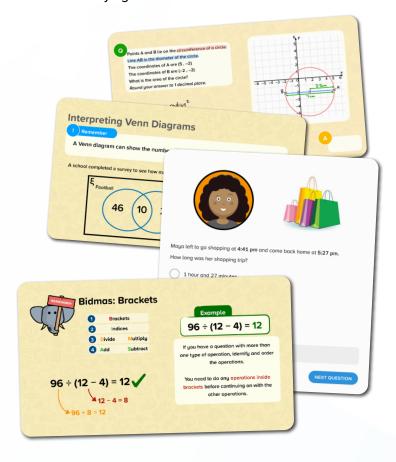
**View Course Content** 



## **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**



# 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
Diagnostics	9
Number and Place Value	11
Addition and Subtraction	18
Multiplication and Division	13
Fractions	4

Strand	No. of nuggets
Measurement	9
Money	6
Time	6
Geometry	6
Statistics	5

#### **Nuggets mapped to the National Curriculum**

	National Curriculum		CENTURY
Торіс	National Curriculum Statement	Nugget Code	Nugget Name
<u></u>	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
Place Val		PM10.02	Counting in Multiples of 3
mber and		PM10.03	Counting in Multiples of 5
N N	<del>-</del>	PM10.04	Counting in Multiples of 10



Topic	National Curriculum Statement	Nugget Code	Nugget Name
	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
en	identify, represent and estimate numbers using different representations, including the number line	PM1.36	Number Lines to 100
and Place Value	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 ⇔
Number and	read and write numbers to at least 100 in numerals and in words	PM10.16	Reading and Writing Numbers to 20
Ž	read and write numbers to at least 100 in numerals and in words	PM10.17	Reading and Writing Numbers to 100
	use place value and number facts to solve problems		Included in nuggets above
	<del>-</del>	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	I	Included in nuggets below
Additi	solve problems with addition and subtraction applying their increasing knowledge of mental and written methods		mended in haggets below
	F		Number Bonds to 20
	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	PM2.31	Number Bonds to 100
		PM10.11	Single Digit Addition
	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	PM10.13	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
		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)
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	PM2.38	2-Digit: Subtracting 2 Digit Numbers (No Exchanging)
and Sub		PM2.39	2-Digit: Adding 2 Digit Numbers (With Exchanging)
Addition and		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
		PM3.63	Understanding Multiplication
Division	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables	PM10.05	Multiplying by 2
Multiplication and		PM10.06	Multiplying by 5
Multiplia		PM10.07	Multiplying by 10
		PM3.66	Mixed Multiplication 1 (2s,5s & 10s)

Topic	National Curriculum Statement	Nugget Code	Nugget Name
	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
Division		PM10.10	Dividing by 10
Multiplication and Division		PM3.68	Mixed Division 1 (2s, 5s & 10s)
Multiplic	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 ( $\times$ ), division ( $\dot{\div}$ ) 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
	recognise, find, name and write fractions $1/3$ $1/4$ $2/4$ and $3/4$ of a length, shape, set of objects or quantity write simple fractions for example, $1/2$ of $6 = 3$ and recognise the equivalence of $2/4$ and $1/2$	PM4.37	Recognising and Finding a Half
Fractions		PM4.38	Recognising and Finding Quarters
Fract		PM4.39	Recognising and Finding Thirds
	<u>-</u>	PM4.42	Fractions Checkpoint
ints	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
aasurements		PM5.32	2-Digit: Solving Problems with Length and Height
Meaa		PM5.33	2-Digit: Measuring Mass in Grams



National Curriculum Statement	Nugget Code	Nugget Name
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,	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
recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value find different combinations of coins that equal the same amounts of money	PM6.11	Counting Money (Pence)
	PM6.12	Counting Money (Pounds)
	PM6.16	Making the Same Amount
solve simple problems in a practical context involving addition and subtraction of money of the same unit,	PM6.15	Making Amounts (Pounds and Pence)
including giving change	PM6.14	Finding Change 1 (from £1)
-	PM6.17	Money Checkpoint
compare and sequence intervals of time	PM7.10	Estimating Time
compare and sequence intervals of 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
	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  compare and order lengths, mass, volume/capacity and record the results using >, < and =  recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value  find different combinations of coins that equal the same amounts of money  solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change  -  compare and sequence intervals of time	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  PM5.36  PM5.37  PM5.38  compare and order lengths, mass, volume/capacity and record the results using >, < and =  recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value  find different combinations of coins that equal the same amounts of money  PM6.12  find different combinations of coins that equal the same amounts of money of the same unit, including giving change  PM6.15  PM6.15  PM6.16  PM6.17  PM6.17  PM7.10  compare and sequence intervals of time



Topic	National Curriculum Statement	Nugget Code	Nugget Name
	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
Time	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
	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
<b>~</b>	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
Geometry	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
	<u>-</u>	PM7.20	Geometry Checkpoint
		PM9.16	Tally Charts
	ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity  ask and answer questions about totalling and comparing categorical data	PM9.14	Block Diagrams
Statistics		PM9.01	Pictograms
o,		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
Diagnostics	9
Number and Place Value	20
Addition and Subtraction	26
Multiplication and Division	28
Fractions	12
Measurement	9

Strand	No. of nuggets
Money	10
Time	12
Geometry	7
Statistics	5
End of Year Assessments	2

#### **Nuggets mapped to the National Curriculum**

	National Curriculum		CENTURY
Торіс	National Curriculum Statement	Nugget Code	Nugget Name
		PM1.01	Counting in Multiples of 4
Number and Place Value	e de la companya de l	PM1.02	Counting in Multiples of 8
Numb Place	count from 0 in multiples of 4, 8, 50 and 100	PM1.03	Counting in Multiples of 50
		PM1.04	Counting in Multiples of 100

Торіс	National Curriculum Statement	Nugget Code	Nugget Name
	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
<u>υ</u> ω	find 10 more or 10 less than a given number	PM1.07	3-Digit: Finding 10 More or 10 Less
Number and Place Value	find 100 more or 100 less than a given number	PM1.08	Finding 100 More or 100 Less
Z <b>u</b>	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
	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,	PM2.04	3-Digit: Column Addition (no Exchanging)
Addition and Subtraction		PM2.05	3-Digit: Column Addition (with Exchanging)
Additi		PM2.06	3-Digit: Column Subtraction (no Exchanging)
	using formal written methods of columnar addition and subtraction	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



Торіс	National Curriculum Statement	Nugget Code	Nugget Name
5 c	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
Multiplication and Division		PM3.60	2- Digit: Dividing Using Partitioning (No Remainders)
<b>∑</b>		PM3.61	2- Digit: Dividing Using Partitioning (With Remainders)
	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
tions	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
Fractions	recognise and show, using diagrams, equivalent fractions with small denominators	PM4.05	Equivalent Fractions
	recognise and use fractions as numbers: unit fractions	PM4.06	Finding Unit Fractions of Amounts
	and non-unit fractions with small denominators	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
		PM5.01	Units of Measure
		PM5.02 Length	Length
rement	measure, compare, add and subtract: lengths (m/cm/mm)	PM5.03	Solving Length Problems
Measu	mass (kg/g) volume/capacity (l/ml)	PM5.04	Mass and Weight
		PM5.05	Solving Mass Problems
		PM5.06	PM5.06 Volume and Capacity

Торіс	National Curriculum Statement	Nugget Code	Nugget Name
<b>t</b>	measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml)	PM5.07	Solving Volume and Capacity Problems
Measurement		PM5.08	Perimeter by Counting
	measure the perimeter of simple 2-D shapes	PM5.09	Calculating the Perimeter
	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
Уəг		PM6.05	Solving Money Problems 1
Money		PM6.03	Finding Change 2
	add and subtract amounts of money to give change, using both ${\mathfrak L}$ and ${\boldsymbol p}$ in practical contexts	PM6.04 Subtracting Amounts of Money  PM6.14 Finding Change 1 (from £1)	
			Finding Change 1 (from £1)
	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
		PM7.02	Times of Day
		PM7.03	Telling the Time in Words
Time	actimate and read time with ingressing acqueent to the provest minutes	PM7.04	Telling the Time to the Nearest 5 Minutes
	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		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



Тор	ic National Curriculum Statement	Nugget Code	Nugget Name
	estimate and read time with increasing accuracy to the nearest minute;	PM7.09	12 Hour and 24 Hour Clocks
E –	record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight	PM7.10	Estimating Time
Ė	compare durations of events	PM7.11	Finding the Duration
	[for example, to calculate the time taken by particular events or tasks]	PM7.12	Start and End Times
		PM8.01	Describing 2D Shapes
	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	PM8.02	Describing 3D Shapes
		PM8.02 Describing 3D Snapes  PM8.03 Nets of Shapes	
Geometry	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
		PM8.06	Identifying Lines
	identify horizontal and vertical lines and pairs of perpendicular and parallel lines	PM8.07	Lines of Symmetry
Statistics		PM9.01	Pictograms
	interpret and present data using bar charts, pictograms and tables	PM9.02	Tables
		PM9.03	Bar Charts 1

# 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
Diagnostics	10
Number and Place Value	28
Addition and Subtraction	20
Multiplication and Division	39
Fractions and Decimals	16
Measurement	20

Strand	No. of nuggets
Time	13
Money	10
Geometry	13
Statistics	7
Catch Up	36
End of Year Assessments	4

#### **Nuggets mapped to the National Curriculum**

	National Curriculum		CENTURY
Торіс	National Curriculum Statement	Nugget Code	Nugget Name
9		PM1.12	Counting in Multiples of 6
count in multi	count in multiples of 6, 7, 9, 25 and 1,000	PM1.13	Counting in Multiples of 7
mber and		PM1.02	Counting in Multiples of 8
Z		PM1.14	Counting in Multiples of 9

Торіс	National Curriculum Statement	Nugget Code	Nugget Name
		PM1.15	Counting in Multiples of 25
	count in multiples of 6, 7, 9, 25 and 1,000	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
e Value	count be alwayde through 0 to include negative numbers	PM1.18	Negative Numbers 1
r and Place Value	count backwards through 0 to include negative numbers	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
Number	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)
		PM2.13	4-Digit: Column Addition (no Exchanging)
		PM2.14	4-Digit: Column Addition (with Exchanging)
u U	add and subtract numbers with up to 4 digits using the formal	PM2.15	4-Digit: Column Subtraction (no Exchanging)
Subtract	written methods of columnar addition and subtraction where appropriate	PM2.16	4-Digit: Column Subtraction (with Exchanging)
Addition and Subtraction		PM2.17	4-Digit: Addition and Subtraction Practice 2
Ado		PM2.18	4-Digit: Addition and Subtraction Word Problems 2
_		PM2.19	Checking Answers Using the Inverse 2
	estimate and use inverse operations to check answers to a calculation	PM2.20	Estimating to Check Answers

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
		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
sion.		PM3.03	Multiplying by 8
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:	PM3.19	
tiplication	multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers	PM10.07	
¥		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	Dividing by 4
		PM3.23 Dividing by 6	Dividing by 6



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

Topic	National Curriculum Statement	Nugget Code	Nugget Name
	estimate compare and calculate different measures	PM6.03	Finding Change 2
Measurement		PM6.04	Subtracting Amounts of Money
		PM6.10	Solving Money Problems 2
<u>×</u>	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
		PM8.11	Triangles
S	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	PM8.12	Quadrilaterals
. Properti		PM8.13	Sorting Shapes
Geometry - Properties of Shapes	identify acute and obtuse angles and compare and order angles up to two right angles by size	PM8.05	Identifying Angles
Ŏ	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
sition on	describe positions on a 2-D grid as coordinates in the first quadrant	PM8.14	Describing Position
Geometry - Position and Direction	plot specified points and draw sides to complete a given polygon.	PM8.15	Plotting Points
Geom an	describe movements between positions as translations of a given unit to the left/right and up/down	PM8.16	Translation 1
		PM9.01	Pictograms
Statistics	interpret and present discrete and continuous data using appropriate graphical methods,	PM9.02	Tables 1
	including bar charts and time graphs. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	PM9.03	Bar Charts 1
		PM9.04	Line Graphs 1

# 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
Diagnostics	14
Number and Place Value	15
Addition and Subtraction	14
Multiplication and Division	23
Times Tables and Division Facts	24
Mixed operations	7
Fractions	18
Fractions, decimals and percentages	18

Strand	No. of nuggets
Measurement	23
Time	13
Area, Perimeter and Volume	10
Properties of Shapes	21
Position and Direction	4
Statistics	10
End of Year Assessments	4

#### **Nuggets mapped to the National Curriculum**

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

Торіс	National Curriculum Statement	Nugget Code	Nugget Name		
	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	PM1.18	Negative Numbers 1		
	with positive and negative whole numbers, including through 0	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)		
<u>e</u>	round any number up to 1,000,000 to the nearest	PM1.23	Rounding to the Nearest 10, 100 and 1000		
and Place Value	10, 100, 1,000, 10,000 and 100,000	PM1.28	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		
Number and	solve number problems and practical problems that involve all of the above	-	① Included in Nuggets Above		
Ž.		PM7.07	Roman Numerals (up to 20)		
	read Roman numerals to 1,000 (M) and recognise years written in Roman numerals	PM1.24	Roman Numerals (up to 100)		
		PM1.29	Roman Numerals (up to 1000)		
		PM1.30	Roman Numerals (Beyond 1000)		
	add and subtract whole numbers with more than 4 digits,		4+ Digit: Column Addition		
_	including using formal written methods (columnar addition and subtraction)	PM2.23	M2.23 4+ Digit: Column Subtraction		
traction		PM2.24	Mental Strategies for Addition 1		
Addition and Subtraction	add and subtract numbers mentally	PM2.25	Mental Strategies for Addition 2		
Addition	with increasingly large numbers	PM2.26	Mental Strategies for Subtraction 1		
_	P		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		

Topic	National Curriculum Statement	Nugget	Nugget Name			
Topic	Transfer Surrearant Statement	Code				
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			
	identify multiples and factors, including finding all factor pairs of a number,	PM3.30	Factor Pairs			
	and common factors of 2 numbers	PM3.40	3.40 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			
			3/4-Digit: Multiplying by 1-Digit			
	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	PM3.51	51 2-Digit: Multiplying by 2-Digits			
sion		PM3.52	3/4-Digit: Multiplying by 2-Digits			
Multiplication and Division		PM3.47	Mental Strategies for Multiplication 1			
tiplication	multiply and divide numbers mentally, drawing upon known facts	PM3.48 Mental Strategies for Multiplication 2				
W		PM3.49	Mental Strategies for Division			
	divide numbers up to 4 digits by a one-digit number using the formal written method	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)			
	of short division and interpret remainders appropriately for the context	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.)			
	manapiy and divide whole numbers and those involving declinals by 10, 100 and 1,000	PM3.46	Dividing by 10, 100 and 1000 (Involving Decimals Up to 3 d.p.)			
	recognise and use square numbers and cube numbers,		Square Numbers			
	and the notation for squared (²) and cubed (³)	PM3.44	Cube Numbers			





Decimal Equivalents (Tenths/Hundredths)

PM4.10

Topic	National Curriculum Statement	Nugget Code	Nugget Name		
	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	PM12.01	Thousandths		
	round decimals with 2 decimal places to the	PM4.13	Rounding Decimals to the Nearest Whole Number		
	nearest whole number and to 1 decimal place	PM12.03	Rounding Decimals		
entages)		PM12.02	3dp: Recognising Place Value in Decimals		
Perc	read, write, order and compare numbers with up to 3 decimal places	PM4.14	Comparing Decimals		
imals and		PM12.14	Adding and Subtracting Decimals (within 1)		
(Including Deci	solve problems involving number up to 3 decimal places	PM12.15	3dp: Decimal Complements to 1		
ions (Incli		PM12.04	Adding and Subtracting Decimals		
Fract	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		
		PM12.06	Fractions, Decimals and Percentages 1		
	solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{4}{5}$ , and those fractions with a denominator of a multiple of 10 or 25	PM12.07	Finding Percentages 1		
		PM12.08	Finding Percentages 2		
		PM5.11	Converting mm and cm		
ŧ		PM5.12	Converting cm and m		
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]	PM5.13 Converting m and km	Converting m and km		
	community and mind and mogram, me and minime	PM5.14	Converting Length		
		PM5.16	Converting Mass		

Topic	National Curriculum Statement	Nugget Code	Nugget Name	
	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	
			Imperial Units of Length	
	understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	PM5.24	Imperial Units of Mass	
		PM5.26 Imperial Units of Volume and Capacity		
Measurement	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 (cm²) and square metres (m²), 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 cm³ blocks to build cuboids (including cubes)] and capacity [for	PM13.06	Volume of Shapes 1	
	example, using water]	PM5.28	Estimating Volume and Capacity	
		PM7.13	Converting Weeks, Days, Years and Months	
	solve problems involving converting between units of time	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		
	-	PM14.05	Identifying Angles 2		
		PM14.08	Measuring Angles		
		PM14.07	Estimating Angles		
Shapes	draw given angles, and measure them in degrees (°)	PM14.09	Drawing Angles		
Geometry – Properties of Shapes	identify angles at a point and 1 whole turn (total 360°)	PM14.12	Angles Around a Point		
try – Prop	identify angles at a point on a straight line and half a turn (total 180°)	PM14.11	Angles on a Straight Line		
<b>G</b> eome	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	a reflection or translation, using the appropriate language,	PM8.16	Translation 1		
Geom Positic Direc		PM15.01	Reflection 1		
	solve comparison, sum and difference problems using information presented in a line graph	PM9.13	Bar Charts 2		
		PM9.08	Line Graphs 2		
Statistics	complete year and interpret information in tables including timetables	PM9.05	Tables 2		
	complete, read and interpret information in tables, including timetables	PM9.06	Two-Way Tables		
		PM9.07	Timetables		

# 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
Diagnostics	17
Number and Place Value	15
Addition and Subtraction	16
Times Tables and Division Facts	24
Multiplication and Division	27
Mixed Operations	10
Fractions	29
Fractions, Decimals and Percentages	20
Percentages	8

Strand	No. of nuggets
Ratio and Proportion	6
Algebra	11
Measurements	25
Time	13
Area, Perimeter and Volume	14
Properties of Shapes	28
Position and Direction	7
Statistics	15
End of Year 6 Assessments	4

#### **Nuggets mapped to the National Curriculum**

	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



Торіс	National Curriculum Statement	Nugget Code	Nugget Name
e	round any whole number to a required degree of accuracy	PM1.28	Rounding to the Nearest 10,000 and 100,000
and Place Value		PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
Number and	use negative numbers in context, and calculate intervals across 0	PM1.32	Negative Numbers 3
N -	solve number and practical problems that involve all of the above	•	Included in Nuggets Above
	multiply multi-digit numbers up to 4 digits by a two-digit whole number	PM3.51	2-Digit: Multiplying by 2-Digits
	using the formal written method of long multiplication	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	PM3.57	Long Division 1 (Dividing by a Single Digit Number)
	method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	PM3.58	Long Division 2 (Dividing by a 2 Digit Number)
and Division	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)
Multiplication an		PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)
n, Multipl		PM3.56	Dividing by 2 Digit Numbers Using Short Division
Subtraction,	perform mental calculations, including with mixed operations and large numbers	PM2.24	Mental Strategies for Addition 1
Addition, S		PM2.25	Mental Strategies for Addition 2
4		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

Topic	National Curriculum Statement	Nugget Code	Nugget Name
	perform mental calculations, including with mixed operations and large numbers	PM3.49	Mental Strategies for Division
	identify common factors, common multiples and prime numbers P	PM3.40	Common Factors
		PM3.41	Prime Numbers
-		PM3.55	Common Multiples
and Division		PM11.05	Operations of Equal Priority
Multiplication an	use their knowledge of the order of operations to carry out calculations involving the 4 operations	PM11.06	BIDMAS: 4 Operations and Brackets
n, Multipl		PM11.07	BIDMAS: Indices
Addition, Subtraction,	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
ddition, S		PM11.02	Solving Multistep Problems 1 (with Multiplication)
٩		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
	use common factors to simplify fractions; use common multiples to express fractions in the same denomination	PM4.23	Simplifying Fractions
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
	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
		PM16.01	Finding Percentages of Amounts 1 (1%, 10%, 25%, 50%)
		PM16.02	Finding Percentages of Amounts 2 (2-9%)
ortion	solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison	PM16.03	Finding Percentages of Amounts 3 (multiples of 10)
Ratio and Proportion	, , , , , , , , , , , , , , , , , , ,	PM16.04	Finding Percentages of Amounts 4 (11-99%)
Ratio		PM16.05	Percentages (Missing Values)
	solve problems involving similar shapes where the scale factor is known or can be found	PM17.05	Similar Shapes
			Ratios and Fractions
	solve problems involving unequal sharing and grouping using knowledge of fractions and multiples	PM17.04	Sharing into a Given Ratio
	use simple formulae		Function Machines
			Formulae
	generate and describe linear number sequences	PM18.01	Sequences
Algebra			Forming Expressions 1
Algo		PM18.04	Forming Expressions 2
	express missing number problems algebraically		Forming Expressions 3
			Substitution
		PM18.08	Solving 1 Step Equations

Торіс	National Curriculum Statement	Nugget Code	Nugget Name
	express missing number problems algebraically PN		Solving 2 Step Equations
Algebra	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
	solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate		Converting Length
			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
sasurements	recognise that shapes with the same areas can have different perimeters and vice versa	PM13.05	Area and Perimeter
×	recognice when it is possible to use formulae for area and valume of chance	PM13.02	Area of Rectangles
	recognise when it is possible to use formulae for area and volume of shapes		Volume of Shapes 2
		PM13.07	Area of Parallelograms
	calculate the area of parallelograms and triangles		Area of Right-Angled Triangles
		PM13.09	Area of Triangles
Shapes	draw 2-D shapes using given dimensions and angles	PM14.14	Nets of Shapes 2
operties of S	compare and classify geometric shapes based on their properties and sizes		Angles in Triangles
Prope	and find unknown angles in any triangles, quadrilaterals, and regular polygons	PM14.17	Angles in Quadrilaterals

Торіс	National Curriculum Statement		Nugget Name
	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
ø		PM14.12	Angles Around a Point
of Shapes	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	PM14.11	Angles on a Straight Line
Properties	PI		Vertically Opposite Angles
<u>.</u> .	describe positions on the full coordinate grid (all 4 quadrants)	PM15.02	Four Quadrants
			Translation 2
	draw and translate simple shapes on the coordinate plane, and reflect them in the axes	PM15.04	Reflection 2
			Line Graphs 3
stics	interpret and construct pie charts and line graphs and use these to solve problems	PM9.10	Pie Charts 1
Statistics			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
	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)
s S	PMT1.08	4 Times Table Practice (2)
ion Tab	PMT1.09	4 Times Table Practice (3)
Multiplication Tables	PMT1.10	5 Times Table Practice (1)
<u>N</u>	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
	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)
Tables	PMT1.25	10 Times Table Practice (1)
Multiplication Tables	PMT1.26	10 Times Table Practice (2)
Multip	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)
ice	PMT2.01	Easy Practice (1)
Easy Practice	PMT2.02	Easy Practice (2)
<u>ш</u>	PMT2.03	Easy Practice (3)
ctice	PMT3.01	Medium Practice (1)
Medium Practice	PMT3.02	Medium Practice (2)
Medit	PMT3.03	Medium Practice (3)

Strand	Code	Nugget Name
e .	PMT4.01	Hard Practice (1)
Hard Practice	PMT4.02	Hard Practice (2)
<u><u>e</u></u>	PMT4.03	Hard Practice (3)
	PMT5.01	Practice Assessment (1)
	PMT5.02	Practice Assessment (2)
	PMT5.03	Practice Assessment (3)
ents	PMT5.04	Practice Assessment (4)
Practice Assessments	PMT5.05	Practice Assessment (5)
ctice As	PMT5.06	Practice Assessment (6)
Pra	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
	PAR0.01	Diagnostic: Place Value
	PAR0.02	Diagnostic: Addition
	PAR0.03	Diagnostic: Subtraction
Diagnostics	PAR0.04	Diagnostic: Multiplication
Diagn	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
	PAR2.01	Addition Mental Methods 1
	PAR2.02	Addition Mental Methods 2
Ę	PAR2.03	Addition Written Methods 1
Addition and Subtraction	PAR2.04	Addition Written Methods 2
and Su	PAR2.05	Addition Written Methods with Decimals 1
ddition	PAR2.06	Addition Written Methods with Decimals 2
4	PAR2.07	Subtraction Mental Methods 1
	PAR2.08	Subtraction Mental Methods 2a
	PAR2.09	Subtraction Mental Methods 2b

Strand	Code	Nugget Name
ction	PAR2.10	Subtraction Mental Methods 3
	PAR2.11	Subtraction Written Methods 1
Addition and Subtraction	PAR2.12	Subtraction Written Methods 2
tion and	PAR2.13	Subtraction Involving Decimals
Addit	PAR2.14	Subtraction Written Methods (with Decimals) 1
	PAR2.15	Subtraction Written Methods (with Decimals) 2
	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
Multiplication	PAR3.05	Multiplying by Multiples of 10 and 100 with Decimals
Multip	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
	PAR4.01	Dividing by 1
	PAR4.02	Mental Division
_	PAR4.03	Dividing by 10 and 100 with Decimals
Division	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
<u>s</u>	PAR5.01	Squared and Cubed Numbers 1
eration	PAR5.02	Squared and Cubed Numbers 2
Mixed Operations	PAR5.03	BIDMAS 1
Σ	PAR5.04	BIDMAS 2
	PAR6.01	Adding and Subtracting Fractions 1
	PAR6.02	Adding and Subtracting Fractions 2
ιο.	PAR6.03	Adding and Subtracting Fractions 3
Fractions	PAR6.04	Dividing Fractions by a Whole Number
ш	PAR6.05	Multiply Fractions by Fractions
	PAR6.06	Multiply Proper Fractions by a Whole Number
	PAR6.07	Multiply Mixed Numbers by a Whole Number
	PAR7.01	Finding Percentages of Amounts 1
	PAR7.02	Finding 1 - 9% of an Amount
	PAR7.03	Finding Multiples of 10% of an Amount
Percentages	PAR7.04	Percentages of 1,000
Percer	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
cs: pers	PAR8.01	Arithmetic Practice Assessment 1
Diagnostics: Practice Papers	PAR8.02	Arithmetic Practice Assessment 2
Die	PAR8.03	Arithmetic Practice Assessment 3

**Primary Year 5-6 Arithmetic** 

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	$oldsymbol{oldsymbol{arphi}}$
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	

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	H
Rounding	24	
Percentages Non-Calculator	6	
Percentages Calculator	19	
Powers and Roots	7	
Surds	16	H
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	H

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.

Higher Only

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

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

	1411 00.03	Topic Diagnostic. I factions. 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	$lackbox{H}$
	MF00.13	Topic Diagnostic: Percentages	
	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages	
mber	MH00.03	Topic Diagnostic: Recurring Decimals	$lackbox{H}$
is: Nur	MF00.15	Topic Diagnostic: Bounds 1	
nostic	MH00.04	Topic Diagnostic: Bounds 2	$oldsymbol{oldsymbol{H}}$
Topic Diagnostics: Number	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest	
ပု	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse	
	MH00.05	Topic Diagnostic: Exponential Growth and Decay	$oldsymbol{oldsymbol{H}}$
	MF00.18	Topic Diagnostic: Powers and Roots	
	MH00.06	Topic Diagnostic: Surds	$oldsymbol{oldsymbol{H}}$
	MF00.19	Topic Diagnostic: Laws of Indices 1	
	MH00.07	Topic Diagnostic: Laws of Indices 2	$oldsymbol{oldsymbol{H}}$
	MH00.08	Topic Diagnostic: Fractional Indices	H

MH00.09 Topic Diagnostic: Solving Problems with Indices

MF00.20 Topic Diagnostic: Standard Form

Topic Diagnostic: Fractions

MF00.08 Topic Diagnostic: Fractions: Addition and Subtraction

MF00.09 Topic Diagnostic: Fractions: Multiplication and Division

MF00.07

 $oldsymbol{\mathsf{H}}$ 

	MF00.21	Topic Diagnostic: Ratio	
ics: rrtion	MF00.22	Topic Diagnostic: Ratio: Sharing 1	
gnost Propo	MH00.10	Topic Diagnostic: Ratio: Sharing 2	$oldsymbol{oldsymbol{H}}$
Topic Diagnostics: Ratio and Proportion	MF00.23	Topic Diagnostic: Proportion	
Top Ratic	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	
	MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	$oldsymbol{oldsymbol{H}}$
	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	
Ø	MF00.29	Topic Diagnostic: Solving Linear Equations 2	
lgebra	MF00.30	Topic Diagnostic: Solving Simultaneous Linear Equations	
tics: A	MH00.13	Topic Diagnostic: Iteration	$oldsymbol{oldsymbol{H}}$
gnos	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
Topic Diagnostics: Algebra	MH00.14	Topic Diagnostic: The Quadratic Formula	$oldsymbol{oldsymbol{H}}$
Тор	MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	$oldsymbol{oldsymbol{H}}$
	MH00.16	Topic Diagnostic: Completing the Square	$oldsymbol{H}$
	MH00.17	Topic Diagnostic: Algebraic Fractions	H
	MF00.32	Topic Diagnostic: Formulae	
	MH00.18	Topic Diagnostic: Algebraic Proof	H
	MH00.19	Topic Diagnostic: Functions	$oldsymbol{H}$
	MH00.20	Topic Diagnostic: Composite Functions	H

<u>o</u>	MH00.21	Topic Diagnostic: Inverse Functions	H
Topic Diagnostics: Algebra	MF00.33	Topic Diagnostic: Sequences	
tics: /	MH00.22	Topic Diagnostic: Quadratic Sequences	H
agnos	MF00.34	Topic Diagnostic: Inequalities	
pic Di	MF00.35	Topic Diagnostic: Solving Inequalities 1	
<u>D</u>	MH00.23	Topic Diagnostic: Solving Inequalities 2	H
	MF00.36	Topic Diagnostic: Coordinates	
	MF00.37	Topic Diagnostic: Straight Line Graphs 1	
S	MH00.24	Topic Diagnostic: Straight Line Graphs 2	H
Graph	MH00.25	Topic Diagnostic: Inequality Regions	H
stics:	MF00.38	Topic Diagnostic: Quadratic Graphs 1	
Topic Diagnostics: Graphs	MH00.26	Topic Diagnostic: Quadratic Graphs 2	H
pic D	MF00.39	Topic Diagnostic: Other Graphs 1	
2	MH00.27	Topic Diagnostic: Other Graphs 2	H
	MH00.28	Topic Diagnostic: Trigonometric Graphs	H
	MH00.29	Topic Diagnostic: Graph Transformations	H
	MF00.40	Topic Diagnostic: 2D and 3D Shapes	
etry	MF00.41	Topic Diagnostic: Angles	
Seomo	MF00.42	Topic Diagnostic: Angle Rules	
tics: (	MF00.43	Topic Diagnostic: Angles in Parallel Lines	
agnos	MF00.44	Topic Diagnostic: Angles in Polygons	
Topic Diagnostics: Geometry	MF00.45	Topic Diagnostic: Perimeter	
Тор	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	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	
netry	MH00.32	Topic Diagnostic: Enlargements and Mixed Transformations 2	$oldsymbol{oldsymbol{H}}$
Geor	MH00.33	Topic Diagnostic: Circle Theorems	H
Topic Diagnostics: Geometry	MF00.53	Topic Diagnostic: Vectors	
	MH00.34	Topic Diagnostic: Geometric Vectors	H
opic [	MF00.54	Topic Diagnostic: Constructions and Loci	
-	MF00.55	Topic Diagnostic: Similarity 1	
	MH00.35	Topic Diagnostic: Similarity 2	$lackbox{H}$
	MF00.56	Topic Diagnostic: Pythagoras' Theorem	
	MF00.57	Topic Diagnostic: Right-Angled Trigonometry	
	MH00.36	Topic Diagnostic: Sine and Cosine Rules	$lackbox{H}$
	MH00.37	Topic Diagnostic: Mixed Trigonometry	$lackbox{H}$
	MH00.38	Topic Diagnostic: 3D Pythagoras and Trigonometry	$lackbox{\textbf{H}}$
	MF00.58	Topic Diagnostic: Scale Drawings and Bearings	
Topic agnostics: leasures	MF00.59	Topic Diagnostic: Measures 1	
	MF00.60	Topic Diagnostic: Measures 2	
<u>.¤ ≤</u>			

Topic Diagnostics: Measures	MF00.62	Topic Diagnostic: Conversions	
	MF00.63	Topic Diagnostic: Compound Measures: Speed	
	MF00.64	Topic Diagnostic: Compound Measures: Density	
ф	MH00.39	Topic Diagnostic: Velocity-time Graphs	$oldsymbol{H}$
A IIII	MF00.65	Topic Diagnostic: Probability 1	
obab	MH00.40	Topic Diagnostic: Probability 2	$oldsymbol{oldsymbol{H}}$
ics: Pr	MF00.66	Topic Diagnostic: Tree Diagrams 1	
Topic Diagnostics: Probability	MH00.41	Topic Diagnostic: Tree Diagrams 2	$oldsymbol{oldsymbol{H}}$
ic Dia	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
Тор	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	$oldsymbol{oldsymbol{H}}$
	MF00.68	Topic Diagnostic: Collecting Data	
stics	MF00.69	Topic Diagnostic: Displaying Data	
: Stati	MF00.70	Topic Diagnostic: Averages and the Range	
Topic Diagnostics: Statistics	MF00.71	Topic Diagnostic: Averages and the Range from a Frequency Table	
c Diag	MH00.43	Topic Diagnostic: Cumulative Frequency	$oldsymbol{\mathbb{H}}$
Topi	MH00.44	Topic Diagnostic: Box Plots	$oldsymbol{\mathbb{H}}$
	MH00.45	Topic Diagnostic: Histograms	$oldsymbol{H}$
	MF1.01	Addition	
etic	MF1.02	Subtraction	
rithme	MF1.03	Addition and Subtraction	
Simple Arithmetic	MF1.04	Times Tables: 2, 5 and 10	
Sir	MF1.05	Times Tables: 3 and 4	
	MF1.06	Times Tables: 6 and 7	

MF00.61 Topic Diagnostic: Measures of Time

	MF1.07	Times Tables: 8 and 9
	MF1.08	Times Tables: 11 and 12
ətic	MF1.09	Commutative Law
Simple Arithmetic	MF1.10	Associative Law
ple A	MF1.11	Division: 1, 2, 3, 4, 5 and 10
Sin	MF1.12	Division: 6, 7, 8, 9, 11 and 12
	MF1.13	Division: Mixed
	MF1.14	Distributive Law
	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
ber	MF2.05	Adding Negatives
Understanding Number	MF2.06	Subtracting Negatives
anding	MF2.07	Negatives and Positives
dersta	MF2.08	Ordering Integers
Ü	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	MF3.01	Column Addition
- Fc Opera	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
ions	MF3.10	Testing for Divisibility
Four Operations	MF3.11	Short Division
our O	MF3.12	Dividing by Multi-Digit Numbers
ш.	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
	MF4.01	Expressing Fractions
ctions	MF4.02	Ordering Fractions
h Frac	MF4.03	Equivalent Fractions
Working with Fractions	MF4.04	Simplifying Fractions
Worki	MF4.05	Shading Fractions
	MF4.06	Mixed and Improper Fractions

	MF4.28	Dividing with Whole Numbers and Fractions	
	MF4.39	Fraction of Amounts: Modelling	
	MF4.29	Fraction of Amounts: Non-Calculator	
us.	MF4.30	Fraction of Amounts: Calculator	
ractio	MF4.31	Increasing and Decreasing by Fractions	
with F	MF4.40	Fraction of Amounts: Modelling Finding the Whole	
Working with Fractions	MF4.32	Reverse Fractions	
Wo	MF4.33	Reverse Fractions: Worded Questions	
	MF4.34	Estimating Products of Fractions	
	MF4.35	Dividing Fractions (Bar Model)	
	MH4.34	Applied Fractions	$oldsymbol{\mathbb{H}}$
	MF5.01	Odds and Evens with Addition and Subtraction	
	MF5.02	Odds and Evens with Multiplication	
	MF5.03	Primes	
Sel	MF5.04	Multiples	
Factors, Multiples and Primes	MF5.05	Factors	
es an	MF5.06	Multiples and Factors	
Aultipl	MF5.07	Lowest Common Multiple - Listing Technique	
tors, N	MF5.08	Highest Common Factor - Listing Technique	
Fac	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	
		A	

	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors	
nes	MF5.14	LCM Using Prime Factorisation: Venn Diagrams	
nd Prii	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors	
les ar	MF5.16	HCF and LCM with Prime Factorisation	
Multip	MH5.17	HCF and LCM of 3 Numbers	H
Factors, Multiples and Primes	MH5.18	Solving Problems with HCF and LCM 1	H
Fac	MH5.19	Solving Problems with HCF and LCM 2	H
	MH5.20	Solving Problems with HCF and LCM 3: Reverse	$oldsymbol{H}$
	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	
imals	MF6.06	Multiplying Decimals 1	
:h Dec	MF6.07	Multiplying Decimals 2	
ng wit	MF6.08	Multiplying Decimals: Worded Questions	
Working with Decimals	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%
	MF7.04	Finding 10%
(C)	MF7.05	Finding 5%
es (N	MF7.06	Finding 1%
Introduction to Percentages (NC)	MF7.07	Finding Multiples of Tens in Percentages
o Perc	MF7.15	Percentages of Amounts: Modelling
tion to	MF7.08	Finding Percentages of Amounts 1
roduc	MF7.09	Finding Percentages of Amounts 2
<u>T</u>	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
	MF8.01	Introduction to Fractions, Decimals and Percentages
S	MF8.02	Converting Fractions to Denominator 100
cimal	MF8.03	Fractions to Percentage
Fractions, Decimals and Percentages	MF8.04	Decimals to Percentage
ractio and P	MF8.05	Percentage to Decimals
ш "	MF8.06	Fractions to Decimals 1: Equivalent Fractions
	MF8.07	Fractions to Decimals 2: Division
		<u> </u>

	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	
ding	MF9.11	Introduction to Estimation	
Rounding	MF9.12	Estimation	
	MF9.13	Bounds 1: Introduction	
	MF9.14	Bounds 2: Simple Calculation	
	MF9.15	Bounds 3: Intervals	
	MH9.16	Bounds 4: Addition	$oldsymbol{H}$
	MH9.17	Bounds 5: Subtraction	$oldsymbol{H}$
	MH9.18	Bounds 6: Multiplication	$oldsymbol{H}$
_	MH9.19	Bounds 7: Division	$oldsymbol{H}$
	MH9.20	Bounds 8: Mixed Operations	$oldsymbol{H}$
	MH9.21	Bounds 9: Formulae	$oldsymbol{H}$
	MH9.22	Bounds 10: Suitable Degrees of Accuracy	$oldsymbol{H}$

ding	MH9.23	Bounds 11: Discrete Variables	
Rounding	MH9.24	Truncation	$oldsymbol{\Theta}$
- To	MF10.06	Percentage Increase and Decrease: Modelling	
alculat	MF10.01	Percentage Increase	
lon-C	MF10.02	Percentage Decrease	
ges N	MF10.03	Percentage Increase and Decrease	
Percentages Non-Calculator	MF10.04	Finding Percentages greater than 100	
Per	MF10.05	Simple Interest	
	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	
ulator	MF11.05	Repeated Percentage Increase and Decrease (Calculator)	
s Calc	MF11.06	Simple Interest (Calculator)	
ntage	MF11.07	Compound Interest (Calculator)	
Percentages 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	

Percentages Calculator	MF11.12	Percentage Error	
	MF11.13	Express One Amount as a Percentage of Another	
; Calc	MF11.14	Percentage Problems	
ıtages	MH11.14	Exponential Growth	$oldsymbol{H}$
ercer	MH11.15	Exponential Decay	H
ш	MH11.16	Exponential Growth and Decay	H
	MF12.01	Squares	
	MF12.02	Cubes	
Roots	MF12.03	Squaring and Cubing Negatives	
s and	MF12.04	Powers	H
Powers and Roots	MF12.05	Roots of Squares and Cubes	
ш.	MF12.06	Roots	
	MH12.07	Estimating Powers and Roots	$oldsymbol{\mathbb{H}}$
	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
Surds	MH52.05	Surds: Simplifying 3 (Dividing Surds)	H
0,	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
			H

MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	$lackbox{H}$
MH52.11	Surds: Expanding 5 (Difference of Two Squares)	H
MH52.12	Surds: Rationalising 1 (Monomial Denominator)	$oldsymbol{oldsymbol{H}}$
MH52.13	Surds: Rationalising 2 (Binomial Denominator)	H
MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)	$oldsymbol{oldsymbol{H}}$
MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)	$oldsymbol{oldsymbol{H}}$
MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)	$oldsymbol{oldsymbol{H}}$
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	$lackbox{H}$
MH13.09	Fractional Indices 2: Non-Unit Fraction	$oldsymbol{oldsymbol{artheta}}$
MH13.10	Fractional Indices 3: Negative Unit Fractions	$lackbox{H}$
MH13.11	Fractional Indices 4: Negative Non-Unit Fractions	$lackbox{H}$
MH13.12	Fractional Indices 5: Fraction Base	$oldsymbol{oldsymbol{artheta}}$
MH13.13	Fractional Indices: Calculator	$oldsymbol{oldsymbol{H}}$
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	MF30.06	Perimeter and Algebra
	MF31.01	Area by Counting Squares
ල 0	MF31.02	Estimating Area
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	
	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	
Circles	MF32.09	Area of a Circle	
0	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	
3D SF	MF33.03	Plans and Elevations with Cuboids	
	MF33.04	Plans and Elevations	
	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	
Volume	MF34.08	Volume of Cylinders with a Missing Value	
Vol	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	

Volume	MH34.17	Problem Solving with Volume	H
	MH34.18	Volume of Frustums	H
	MF35.01	Surface Area of Cuboids	
	MF35.02	Surface Area of Prisms	
	MF35.03	Surface Area of Cylinders	
rea	MF35.04	Surface Area of Part Cylinders	
Surface Area	MF35.05	Surface Area of Spheres	
Sur	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	$oldsymbol{oldsymbol{H}}$
	MF36.01	Reading Scales	
	MF36.02	Metric Units	
	MF36.03	Estimating with Metric Units	
	MF36.04	Converting Metric Length (One Step)	
ø	MF36.05	Converting Metric Length (Multi-Step)	
Measure	MF36.06	Converting Metric Length: Worded Questions	
W	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
<u>e</u>	MF36.16	Metric and Imperial Length (No Calculator)
Measure	MF36.17	Metric and Imperial Length (Calculator)
Σ	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
эеу	MF37.05	Converting Time: Seconds, Minutes and Hours
Time and Money	MF37.06	Converting Time: Days, Weeks and Years
ne an	MF37.07	Calendar Months
Ë	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

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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	H
Compound Measure	MH38.23	Velocity-Time Graph: Distance	H
Compound	MH38.24	Velocity-Time Graph: Acceleration	H
	MH38.25	Velocity-Time Graph: Problem Solving	H
	MF39.01	Using Scales with Units	
	MF39.02	Finding Scales with Units	
Sbu	MF39.03	Using Scales without Units	
Scale Drawings and Bearings	MF39.04	Finding Scales without Units	
and	MF39.05	Using Scales on a Map	
ıwings	MF39.10	Creating Scale Diagrams	
le Dra	MF39.06	Introduction to Bearings	
Sca	MF39.07	Bearings from North	
	MF39.08	Finding Bearings 1	
	MF39.09	Finding Bearings 2: Using Co-interior Angles	
	MF40.01	Introduction to Reflection	
	MF40.02	Finding the Line of Reflection	
SI	MF40.03	Coordinates in Reflection	
natior	MF40.04	Translating a Point	
Transformations	MF40.05	Translating a Shape	
Tra	MF40.06	Describing Translations	
	MF40.07	Enlarging Shapes	
	MF40.08	Enlargements with 0 <sf<1< td=""><td></td></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	H
	MH40.21	Enlargement with Negative Fractional Scale Factor	H
v	MH40.22	Enlargement with Mixed Scale Factor	H
nation	MF40.13	Describing Enlargements with an Integer Scale Factor	
Transformations	MF40.14	Describing Enlargements with a Non-Integer Scale Factor	
F	MH40.23	Describing Enlargements with Mixed Scale Factor	$oldsymbol{oldsymbol{H}}$
	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
ms	MH57.02	Properties of Diameter and Radii	$oldsymbol{oldsymbol{H}}$
leorer	MH57.03	Tangents from an External Point	$oldsymbol{H}$
Circle Theorems	MH57.04	Angles at the Centre	$oldsymbol{H}$
Ö	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
US	MH57.08	Alternate Segment Theorem	H
Circle Theorems	MH57.09	Mixed Circle Theorems 1: Practice	H
	MH57.10	Mixed Circle Theorems 2: Algebra	H
ö	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	
W	MF41.06	Geometric Vectors 2: Two Terms	
Vectors	MH41.07	Geometric Vectors 3: Within Shapes	$oldsymbol{H}$
>	MH41.08	Geometric Vectors 4: Expand and Simplify	$oldsymbol{H}$
	MH41.09	Geometric Vectors 5: Midpoints	$oldsymbol{H}$
	MH41.10	Geometric Vectors 6: Ratios	$oldsymbol{H}$
	MH41.11	Geometric Vectors 7: Fractions and Ratios	H
	MH41.12	Geometric Vectors 8: Parallel Vectors	H
	MH41.13	Geometric Vectors 9: Proof	H
- tion	MF42.01	Constructing Circles	
Construction and Loci	MF42.02	Constructing an Equilateral Triangle	
Con	MI42.10	Constructing Triangles	

. <u>ō</u>	MF42.03	Perpendicular Bisector	
	MF42.04	Angle Bisector	
nd La	MF42.05	Perpendicular from a Point to a Line	
tion a	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)	
Construction and Loci	MF42.07	Understanding Loci	
ပိ	MF42.08	Loci 1: Single Constructions	
	MF42.09	Loci 2: Multi-Step Problems	
	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	
arity	MF43.05	Similar Triangles 1: Same Orientation	
Similarity	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
	MF44.01	Pythagoras' Theorem	
as	MF44.02	Pythagoras: Finding the Hypotenuse	
Pythagoras	MF44.03	Pythagoras: Finding a Short Side	
P	MF44.04	Pythagoras: Mixed Sides	
	MF44.05	Pythagoras: Using Coordinates	

Pythagoras	MF44.06	Pythagoras: Worded Questions	
	MF44.07	Pythagoras: Applied Questions	
Ž	MF45.01	Introduction to SOHCAHTOA	
	MF45.02	Trigonometry: Using a Calculator	
nomet	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)	
Trigor	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)	
Right-Angled Trigonometry	MF45.05	Trigonometry: Missing Angle	
ght-Aı	MF45.06	Trigonometry: Worded Questions	
瓷	MF45.07	Exact Trigonometric Values	
	MF45.08	Trigonometry and Pythagoras	
	MH58.01	Area using ½ (ab) sin (C): Proof	$oldsymbol{\mathbb{H}}$
	MH58.02	1/2 (ab) sin (C): Finding the area	$oldsymbol{\mathbb{H}}$
	MH58.03	1/2 (ab) sin (C): Area with Missing Value	$oldsymbol{\mathbb{H}}$
_	MH58.04	1/2 (ab) sin (C): Applied	$oldsymbol{\mathbb{H}}$
Advanced Trigonometry	MH58.05	Sine Rule: Proof	$oldsymbol{\mathbb{H}}$
rigonc	MH58.06	Sine Rule: Sides	$oldsymbol{\mathbb{H}}$
ced T	MH58.07	Sine Rule: Angles	$oldsymbol{\mathbb{H}}$
∆dvan	MH58.08	Sine Rule: Applied	$oldsymbol{\mathbb{H}}$
٩	MH58.09	Cosine Rule: Proof	$oldsymbol{\mathbb{H}}$
	MH58.10	Cosine Rule: Finding a	$oldsymbol{\mathbb{H}}$
	MH58.11	Cosine Rule: Finding A	$oldsymbol{\mathbb{H}}$
	MH58.12	Cosine Rule: Applied	H

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
٩	MH58.18	Mixed Trigonometry 5: Bearings	H
	MH59.01	3D Pythagoras 1: Cuboids	H
netry	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	H
3D Trigonometry	MH59.03	3D SOH CAH TOA	H
ő ŢŢ	MH59.04	3D Trigonometry	H
(.,	MH59.05	3D Trigonometry: Problem Solving	H
	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	
Probability	MF46.06	Listing Outcomes	
Pro	MH46.18	Product Rule for Counting	H
	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)	
	MH46.19	Addition Law of Probability (General OR)	$oldsymbol{\mathbb{H}}$
	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)	
Probability	MH46.20	Tree Diagrams 5: AND/OR Statements (3 Branch Trees)	$oldsymbol{\mathbb{H}}$
Prob	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)	$oldsymbol{\mathbb{H}}$
	MH46.22	Tree Diagrams 7: NOT Statements	$oldsymbol{\mathbb{H}}$
	MH46.23	Tree Diagrams 8: Reverse	$oldsymbol{\mathbb{H}}$
	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	
Sets	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	$lackbox{H}$
	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams	
	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)	$oldsymbol{\Theta}$
grams	MH47.14	Venn Diagrams: Complements	$lackbox{H}$
n Dia	MH47.15	Venn Diagrams with Algebra	$oldsymbol{\mathbb{H}}$
d Ven	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams	
Sets and Venn 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)	$oldsymbol{oldsymbol{H}}$
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)	$oldsymbol{oldsymbol{H}}$
-	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)	
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams From Set Notation)	$oldsymbol{\Theta}$
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	$oldsymbol{oldsymbol{H}}$
<u> </u>	MF48.01	Hypotheses, Primary Data and Secondary Data	
Collecting	MF48.02	Discrete and Continuous Data	
ŏ	MF48.03	Tally Chart	

Collecting Data	MF48.04	Questionnaires	
	MF48.05	Types of Random Sampling	
	MF48.06	Fair Samples	
Colle	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	
g Data	MF49.08	Range 2: Decimals and Negatives	
Analysing Data	MF49.09	Applying Averages and the Range 1: Raw Data	
Ang	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	

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
Ane	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
	MF50.03	Pictograms
	MF50.04	Bar Charts
	MF50.05	Multiple and Composite Bar Charts
	MF50.06	Vertical Line Graphs
ata	MF50.07	Creating Stem and Leaf Diagrams
ng Da	MF50.08	Interpreting Stem and Leaf Diagrams
Displaying Data	MF50.09	Creating Pie Charts (No Calculator)
Die	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	
	MH60.01	Cumulative Frequency 1: Calculating	H
	MH60.02	Cumulative Frequency 2: Drawing	H
	MH60.03	Cumulative Frequency 3: Calculating Frequency	H
κί	MH60.04	Cumulative Frequency 4: Finding Values	H
× Plot	MH60.05	Cumulative Frequency 5: Median	H
nd Bo	MH60.06	Cumulative Frequency 6: Quartiles	H
ıncy a	MH60.07	Cumulative Frequency 7: Interquartile Range	H
Cumulative Frequency and Box Plots	MH60.08	Cumulative Frequency 8: Plot and Evaluate	H
tive F	MH60.09	Box Plots 1: Interpret	H
umula	MH60.10	Box Plots 2: Finding Values to Plot	$oldsymbol{H}$
Ō	MH60.11	Box Plots 3: Draw from List	$oldsymbol{oldsymbol{H}}$
	MH60.12	Box Plots 4: Draw from Data	$oldsymbol{oldsymbol{H}}$
	MH60.13	Box Plots 5: Evaluate and Compare	$oldsymbol{oldsymbol{H}}$
	MH60.14	Cumulative Frequency and Box Plots	$oldsymbol{oldsymbol{H}}$
	MH61.01	Frequency Density 1: Calculating	H
Histograms	MH61.02	Frequency Density 2: Problem Solving	$oldsymbol{\mathbb{H}}$
	MH61.03	Histograms 1: Choosing Axes	$oldsymbol{\mathbb{H}}$
	MH61.04	Histograms 2: Plotting	$oldsymbol{\mathbb{H}}$
	MH61.05	Histograms 3: Calculating Frequency	$oldsymbol{\mathbb{H}}$
	MH61.06	Histograms 4: Calculating Frequency within a Given Range	H

	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)	H
Histograms	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	$oldsymbol{H}$
	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.

Strand	Nuggets
Diagnostics Catch Up	3
Diagnostics	10
Place Value Catch Up	12
Topic Diagnostics: Number	20
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

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
Area	9
Circles	16
3D Shapes	5
Volume	16
Surface Area	8
Measure	31
Time and Money	18
Compound Measure	21
Scale Drawings and Bearings	10
Transformations	19
Vectors	6
Construction and Loci	10

Similarity	6
Pythagoras	7
Right-Angled Trigonometry	8
Probability	17
Sets and Venn Diagrams	11
Collecting Data	7
Analysing Data	21
Displaying Data	21

## **Nuggets**

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

Strand	Code	Nugget Name
ics	MCU0.01	Diagnostic: Essential Four Operations
Diagnostics Catch Up	MCU0.02	Diagnostic: Catch Up
Dia Q	MCU0.03	Diagnostic: Secondary Ready
	MF0.01	Diagnostic: Number 1
	MF0.02	Diagnostic: Algebra 1
ics	MF0.30	Diagnostic: Ratio and Proportion 1
Diagnostics	MF0.03	Diagnostic: Geometry 1
Dia	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
	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
th Up	PM1.02	Counting in Multiples of 8
Place Value Catch Up	PM10.04	Counting in Multiples of 10
Value	PM1.03	Counting in Multiples of 50
Place	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
	MF00.01	Topic Diagnostic: Times Tables
Topic Diagnostics: Number	MF00.02	Topic Diagnostic: Calculations 1
	MF00.03	Topic Diagnostic: Calculations 2
	MF00.04	Topic Diagnostic: Negative Numbers
	MF00.05	Topic Diagnostic: Decimals
Topic	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
nber	MF00.12	Topic Diagnostic: LCM and HCF1
s: Nur	MF00.13	Topic Diagnostic: Percentages
Topic Diagnostics: Number	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages
Diagr	MF00.15	Topic Diagnostic: Bounds 1
Topic	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
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	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
Inequalities	MF25.06	Solving Inequalities: One Step
Inequ	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
	MF26.01	Key Terms in 2D Geometry
>	PM8.06	Identifying Lines
ometr	PM8.07	Lines of Symmetry
to Ge	MF26.02	Key Terms in 3D Geometry
Introduction to Geometry	PM8.05	Identifying Angles
ntrodu	MF26.03	Types of Angles 1: Diagrams
<u>-</u>	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
etry	MF26.09	Types of Quadrilateral
Gеоm	MF26.10	Naming 3D Shapes
on to	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)
Introduction to Geometry	MF26.12	Measuring Angles 2: Angles < 180°
Intro	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°
10	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
W	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
Angles in Polygons	MF28.05	Angles in Quadrilaterals
in Po	MF28.06	Introduction to Angles in Polygons
√ngles	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
es	PM8.01	Describing 2D Shapes
2D Shapes	MF29.03	Quadrilateral Facts
20	MF29.04	Polygon Facts
	MF29.05	Naming the Parts of a Circle
	MF29.06	Congruence
	MF29.07	Congruent Triangles

	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
Perimeter	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
Perin	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
	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
Area	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
	MF32.01	Circumference: From Radius
Circles	MF32.02	Circumference: From Diameter
	MF32.03	Circumference
	MF32.04	Using the Circumference to find the Radius or Diameter
J	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
Circles	MF32.12	Areas of Composite Shapes with Part Circles
Ü	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
	PM8.02	Describing 3D Shapes
Ses	MF33.01	Planes of Symmetry
3D Shapes	MF33.02	Nets of Cubes
<b>8</b>	MF33.03	Plans and Elevations with Cuboids
	MF33.04	Plans and Elevations
	MF34.01	Counting Cubes
	MF34.02	Volume of Cubes and Cuboids
Volume	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
Volume	MF34.12	Volume of a Cone
Volu	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
Ø	MF35.03	Surface Area of Cylinders
e Areă	MF35.04	Surface Area of Part Cylinders
Surface Area	MF35.05	Surface Area of Spheres
0)	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
sure	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)
sure	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
	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

	PM5.07	Solving Volume and Capacity Problems
Measure	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter
	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
ley	MF37.04	Converting Time: AM and PM
Time and Money	MF37.05	Converting Time: Seconds, Minutes and Hours
ne an	MF37.06	Converting Time: Days, Weeks and Years
Ė	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)

-	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)
sure	MF38.10	Finding Density (DMV)
Compound Measure	MF38.11	Finding Density with Conversions (DMV)
bunod	MF38.12	Finding Mass (DMV)
Сош	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	MF39.01	Using Scales with Units
and Bearings	MF39.02	Finding Scales with Units

	MF39.03	Using Scales without Units
ngs	MF39.04	Finding Scales without Units
Bearii	MF39.05	Using Scales on a Map
sand	MF39.10	Creating Scale Diagrams
wings	MF39.06	Introduction to Bearings
Scale Drawings and Bearings	MF39.07	Bearings from North
Sca	MF39.08	Finding Bearings 1
	MF39.09	Finding Bearings 2: Using Co-interior Angles
	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
ns	MF40.06	Describing Translations
matio	MF40.07	Enlarging Shapes
Fransformations	MF40.08	Enlargements with 0 <sf<1< td=""></sf<1<>
Ta	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)
tions	MF40.16	Rotation with Centre (x,y)
Transformations	MF40.17	Describing Rotation
Trans	MF40.18	Describing Transformations
	MF40.19	Combination of Transformations 1
	MF41.01	Column Vectors
	MF41.02	Column Vectors: Scalar Multiplication
tors	MF41.03	Column Vectors: Addition and Subtraction
Vectors	MF41.04	Column Vectors: Drawing
	MF41.05	Geometric Vectors 1: One Term
	MF41.06	Geometric Vectors 2: Two Terms
	MF42.01	Constructing Circles
	MF42.02	Constructing an Equilateral Triangle
	MI42.10	Constructing Triangles
Loci	MF42.03	Perpendicular Bisector
on and	MF42.04	Angle Bisector
Construction and Loci	MF42.05	Perpendicular from a Point to a Line
Cons	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

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

	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
<u>I</u>	MF46.08	Relative Frequency
Probability	MF46.09	Expected Frequency
P	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)
ams	MF47.01	Set Notation
Diagra	MF47.02	Elements in a Set 1: Identifying Elements
Venn	MF47.03	Elements in a Set 2: Unions and Intersections
Sets and Venn Diagrams	MF47.04	Elements in a Set 3: Complements
Sets	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
nn Dié	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)
лd Vel	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams
ets al	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
on .	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)
	MF48.01	Hypotheses, Primary Data and Secondary Data
	MF48.02	Discrete and Continuous Data
Data	MF48.03	Tally Chart
Collecting Data	MF48.04	Questionnaires
Colle	MF48.05	Types of Random Sampling
	MF48.06	Fair Samples
	MF48.07	Grouped Tally Charts: Discrete and Continuous
	MF49.01	Mode
	MF49.02	Median
	MF49.03	Mean 1: Positive Integers
Jata	MF49.04	Mean 2: Decimals and Negatives
Analysing Data	MF49.05	Mean 3: Finding Missing Values
Analy	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
g Dat	MF49.15	Median from Grouped Frequency Table
Analysing Data	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
٩	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
	MF50.03	Pictograms
ta	MF50.04	Bar Charts
Displaying Data	MF50.05	Multiple and Composite Bar Charts
splayi	MF50.06	Vertical Line Graphs
Ö	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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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.

#### 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

Algebraic Fractions	13	
Formulae	11	
Algebraic Proof	4	
Functions	19	
Sequences	18	
Straight Line Graphs	24	
Quadratic and Other Graphs	32	
Inequalities	21	
Calculus	10	$oldsymbol{H}$
Introduction to Geometry	16	
Angles	12	
Angles in Polygons	11	
2D Shapes	6	
Perimeter	6	
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	

Vectors	14
Construction and Loci	6
Similarity	10
Pythagoras	7
Right-Angled Trigonometry	8
Advanced Trigonometry	18
3D Trigonometry	5
Probability	26
Sets and Venn Diagrams	22
Collecting Data	7
Analysing Data	20
Displaying Data	11
Cumulative Frequency and Box Plots	8
Histograms	12

#### **Nuggets**

 $\label{lem:lemma:equation} A \ \text{nugget is a micro-lesson that contains learning material followed by questions to assess learning.}$ 



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



	MF0.05	Diagnostic: Probability 1	
ţi	MI0.21	Diagnostic: Statistics 1	H
Diagnostic	MF0.07	Diagnostic: Algebra 2	
Ö	MF0.31	Diagnostic: Ratio and Proportion 2	
	MF0.08	Diagnostic: Geometry 2	
	MI0.22	Diagnostic: Number 3	H
	MI0.23	Diagnostic: Number 4	$oldsymbol{H}$
	MI0.24	Diagnostic: Algebra 3	H
	MI0.25	Diagnostic: Algebra 4	$lackbox{H}$
tics	MI0.26	Diagnostic: Algebra 5	H
Higher Diagnostics	MH0.32	Diagnostic: Ratio and Proportion 3	$lackbox{H}$
her Di	MI0.27	Diagnostic: Geometry 3	$lackbox{H}$
High	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	H
	MI0.28	Diagnostic: Statistics 2	$oldsymbol{H}$
	MI0.29	Diagnostic: Probability 2	$oldsymbol{H}$
	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	$oldsymbol{H}$
	MI0.19	Diagnostic: Calculus	$oldsymbol{H}$
Ė	MF00.01	Topic Diagnostic: Times Tables	
ics: N	MF00.02	Topic Diagnostic: Calculations 1	
Topic Diagnostics: Num- ber	MF00.03	Topic Diagnostic: Calculations 2	
ic Dia	MF00.04	Topic Diagnostic: Negative Numbers	
	MF00.05	Topic Diagnostic: Decimals	

	MH00.01	Topic Diagnostic: Rounding and Estimating	$oldsymbol{oldsymbol{H}}$
	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	$oldsymbol{H}$
Topic Diagnostics: Number	MF00.13	Topic Diagnostic: Percentages	
ics: N	MF00.14	Topic Diagnostic: Fractions, Decimals and Percentages	
gnost	MH00.03	Topic Diagnostic: Recurring Decimals	H
ic Dia	MI00.07	Topic Diagnostic: Bounds 1	
ф.	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	

	MF00.21	Topic Diagnostic: Ratio	
ics: rtion	MF00.22	Topic Diagnostic: Ratio: Sharing 1	
Topic Diagnostics: Ratio and Proportion	MH00.10	Topic Diagnostic: Ratio: Sharing 2	$lackbox{H}$
ic Dia	MF00.23	Topic Diagnostic: Proportion	
Top	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	
	MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	$lackbox{H}$
	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	$oldsymbol{oldsymbol{H}}$
	MF00.28	Topic Diagnostic: Solving Linear Equations 1	
bra	MF00.29	Topic Diagnostic: Solving Linear Equations 2	
Alge	MF00.30	Topic Diagnostic: Solving Simultaneous Linear Equations	
ostics:	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
Diagno	MH00.14	Topic Diagnostic: The Quadratic Formula	H
Topic Diagnostics: Algebra	MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	H
-	MH00.16	Topic Diagnostic: Completing the Square	$oldsymbol{H}$
	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

	MH00.21	Topic Diagnostic: Inverse Functions	H
ostics:	MF00.33	Topic Diagnostic: Sequences	
Topic Diagnostics: Algebra	MF00.34	Topic Diagnostic: Inequalities	
opic I	MF00.35	Topic Diagnostic: Solving Inequalities 1	
	MH00.23	Topic Diagnostic: Solving Inequalities 2	H
	MF00.36	Topic Diagnostic: Coordinates	
	MF00.37	Topic Diagnostic: Straight Line Graphs 1	
S	MI00.14	Topic Diagnostic: Straight Line Graphs 2	$oldsymbol{oldsymbol{H}}$
Topic Diagnostics: Graphs	MH00.25	Topic Diagnostic: Inequality Regions	$oldsymbol{oldsymbol{H}}$
stics:	MF00.38	Topic Diagnostic: Quadratic Graphs 1	
iagno	MH00.26	Topic Diagnostic: Quadratic Graphs 2	$oldsymbol{oldsymbol{H}}$
opic D	MF00.39	Topic Diagnostic: Other Graphs 1	
Ĕ	MI00.16	Topic Diagnostic: Other Graphs 2	$oldsymbol{H}$
	MH00.28	Topic Diagnostic: Trigonometric Graphs	$oldsymbol{oldsymbol{H}}$
	MH00.29	Topic Diagnostic: Graph Transformations	$oldsymbol{H}$
	MI00.09	Topic Diagnostic: 2D and 3D Shapes	
metry	MF00.41	Topic Diagnostic: Angles	
Geo	MF00.42	Topic Diagnostic: Angle Rules	
ostics	MF00.43	Topic Diagnostic: Angles in Parallel Lines	
Diagn	MF00.44	Topic Diagnostic: Angles in Polygons	
Topic Diagnostics: Geometry	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	$oldsymbol{oldsymbol{H}}$
	MF00.49	Topic Diagnostic: Volume 1	
	MH00.31	Topic Diagnostic: Volume 2	$oldsymbol{H}$
	MF00.50	Topic Diagnostic: Surface Area	
	MF00.51	Topic Diagnostic: Reflection, Rotation and Translation	
etry	MF00.52	Topic Diagnostic: Enlargements and Mixed Transformations 1	
Seom	MH00.33	Topic Diagnostic: Circle Theorems	$lackbox{H}$
stics: (	MF00.53	Topic Diagnostic: Vectors	
Topic Diagnostics: Geometry	MH00.34	Topic Diagnostic: Geometric Vectors	$lackbox{H}$
pic Di	MI00.10	Topic Diagnostic: Constructions and Loci	
P	MF00.55	Topic Diagnostic: Similarity 1	
	MH00.35	Topic Diagnostic: Similarity 2	$lackbox{H}$
	MF00.56	Topic Diagnostic: Pythagoras' Theorem	
	MF00.57	Topic Diagnostic: Right-Angled Trigonometry	
	MH00.36	Topic Diagnostic: Sine and Cosine Rules	$oldsymbol{oldsymbol{H}}$
	MH00.37	Topic Diagnostic: Mixed Trigonometry	$oldsymbol{oldsymbol{H}}$
	MH00.38	Topic Diagnostic: 3D Pythagoras and Trigonometry	$oldsymbol{oldsymbol{H}}$
	MF00.58	Topic Diagnostic: Scale Drawings and Bearings	
ics:	MF00.59	Topic Diagnostic: Measures 1	
Topic gnostics: sasures	MF00.60	Topic Diagnostic: Measures 2	

Topic Diagnostics: Measures	MF00.62	Topic Diagnostic: Conversions	
	MF00.63	Topic Diagnostic: Compound Measures: Speed	
ic Diagnos Measures	MF00.64	Topic Diagnostic: Compound Measures: Density	
Top	MI00.15	Topic Diagnostic: Velocity-time Graphs	H
	MI00.11	Topic Diagnostic: Probability 1	
ostics: Ity	MF00.66	Topic Diagnostic: Tree Diagrams 1	
ic Diagnos <sup>.</sup> Probability	MH00.41	Topic Diagnostic: Tree Diagrams 2	H
Topic Diagnostics: Probability	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
-	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	H
νί	MF00.68	Topic Diagnostic: Collecting Data	
atistic	MI00.13	Topic Diagnostic: Displaying Data	
ics: St	MF00.70	Topic Diagnostic: Averages and the Range	
Topic Diagnostics: Statistics	MI00.12	Topic Diagnostic: Averages and the Range from a Frequency Table	
pic Di	MH00.43	Topic Diagnostic: Cumulative Frequency	$oldsymbol{oldsymbol{H}}$
<u>6</u>	MH00.45	Topic Diagnostic: Histograms	H
	MF1.01	Addition	
	MF1.02	Subtraction	
iţic	MF1.03	Addition and Subtraction	
ithme	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	

MF00.61 Topic Diagnostic: Measures of Time

	MF1.09	Commutative Law
aţic	MF1.10	Associative Law
Simple Arithmetic	MF1.11	Division: 1, 2, 3, 4, 5 and 10
ple A	MF1.12	Division: 6, 7, 8, 9, 11 and 12
Sim	MF1.13	Division: Mixed
	MF1.14	Distributive Law
	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
ber	MF2.05	Adding Negatives
Understanding Number	MF2.06	Subtracting Negatives
nding	MF2.07	Negatives and Positives
dersta	MF2.08	Ordering Integers
Š	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
Su	MF3.01	Column Addition
Four Operations	MF3.02	Column Subtraction
ur Op	MF3.03	Addition and Subtraction: Worded Questions
Ğ.	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
tions	MF3.11	Short Division
)perat	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
	MF4.01	Expressing Fractions
	MF4.02	Ordering Fractions
ctions	MF4.03	Equivalent Fractions
:h Fra	MF4.04	Simplifying Fractions
ng wit	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
		·

	MF4.28	Dividing with Whole Numbers and Fractions	
	MF4.39	Fraction of Amounts: Modelling	
	MF4.29	Fraction of Amounts: Non-Calculator	
suc	MF4.30	Fraction of Amounts: Calculator	
Fractic	MF4.31	Increasing and Decreasing by Fractions	
with F	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)	
	MH4.34	Applied Fractions	$oldsymbol{oldsymbol{H}}$
	MF5.01	Odds and Evens with Addition and Subtraction	
	MF5.02	Odds and Evens with Multiplication	
	MF5.03	Primes	
rimes	MF5.04	Multiples	
and P	MF5.05	Factors	
tiples	MF5.06	Multiples and Factors	
s, Muli	MF5.07	Lowest Common Multiple - Listing Technique	
Factors, Multiples and Primes	MF5.08	Highest Common Factor - Listing Technique	
ш	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	
v	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors	
Prime	MF5.14	LCM Using Prime Factorisation: Venn Diagrams	
and F	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors	
tiples	MF5.16	HCF and LCM with Prime Factorisation	
Factors, Multiples and Primes	MH5.17	HCF and LCM of 3 Numbers	
-actor	MH5.18	Solving Problems with HCF and LCM 1	$oldsymbol{\Theta}$
_	MH5.19	Solving Problems with HCF and LCM 2	$oldsymbol{\Theta}$
	MH5.20	Solving Problems with HCF and LCM 3: Reverse	$oldsymbol{\Theta}$
	MF6.01	Decimal Place Value	
	MF6.02	Adding Decimals 1: Calculations	
	MF6.03	Adding Decimals 2: Worded Problems	
	MF6.04	Subtracting Decimals 1: Calculations	
S	MF6.05	Subtracting Decimals 2: Worded Problems	
cimal	MF6.06	Multiplying Decimals 1	
Working with Decimals	MF6.07	Multiplying Decimals 2	
ing w	MF6.08	Multiplying Decimals: Worded Questions	
Work	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%
	MF7.04	Finding 10%
េ	MF7.05	Finding 5%
es (NC	MF7.06	Finding 1%
entag	MF7.07	Finding Multiples of Tens in Percentages
Perc	MF7.15	Percentages of Amounts: Modelling
Introduction to Percentages (NC)	MF7.08	Finding Percentages of Amounts 1
roduc	MF7.09	Finding Percentages of Amounts 2
<del>L</del>	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
	MF8.01	Introduction to Fractions, Decimals and Percentages
,	MF8.02	Converting Fractions to Denominator 100
Fractions, Decimals and Percentages	MF8.03	Fractions to Percentage
ractions, Decimal and Percentages	MF8.04	Decimals to Percentage
ractio	MF8.05	Percentage to Decimals
ш	MF8.06	Fractions to Decimals 1: Equivalent Fractions
	MF8.07	Fractions to Decimals 2: Division

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	$oldsymbol{\mathbb{H}}$

MF8.08

MF8.09

Percentage to Fractions

**Decimals to Fractions** 

tor	MF10.06	Percentage Increase and Decrease: Modelling
Percentages Non-Calculator	MF10.01	Percentage Increase
Von-C	MF10.02	Percentage Decrease
ages N	MF10.03	Percentage Increase and Decrease
rcenta	MF10.04	Finding Percentages greater than 100
	MF10.05	Simple Interest
	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)
Percentages Calculator	MF11.07	Compound Interest (Calculator)
es Ca	MF11.08	Depreciation (Calculator)
entag	MF11.09	Compound Interest and Depreciation (Calculator)
Perc	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

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  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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets, Surds with Coefficients)  MH52.11 Surds: Expanding 5 (Difference of Two Squares)	
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  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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets, Surds with Coefficients)	
MF12.06 Roots  MH12.07 Estimating Powers and Roots  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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	
MF12.06 Roots  MH12.07 Estimating Powers and Roots  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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	
MF12.06 Roots  MH12.07 Estimating Powers and Roots  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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	
MF12.06 Roots  MH12.07 Estimating Powers and Roots  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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	
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 Bracket)  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	
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 Brack  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	H
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 Brack  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	H
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 Brack  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	H
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 Brack  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	H
MH52.06 Surds: Simplifying 4 (Sum and Difference)  MH52.07 Surds: Expanding 1 (Single Bracket)  MH52.08 Surds: Expanding 2 (Sum/Difference of Single Brack  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	H
MH52.07 Surds: Expanding 1 (Single Bracket)  MH52.08 Surds: Expanding 2 (Sum/Difference of Single Brack  MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	$oldsymbol{oldsymbol{H}}$
MH52.08 Surds: Expanding 2 (Sum/Difference of Single Brack MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	$oldsymbol{oldsymbol{H}}$
MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	$oldsymbol{oldsymbol{H}}$
MH52.09 Surds: Expanding 3 (Double Brackets)  MH52.10 Surds: Expanding 4 (Double Brackets, Surds with Coefficients)	ets) (H)
Coefficients)	H
MH52.11 Surds: Expanding 5 (Difference of Two Squares)	$oldsymbol{H}$
. 5 (	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 Binomia Denominators)	$oldsymbol{oldsymbol{arHeight}}$
MH52.15 Surds: Rationalising 4 (Sum/Difference with Binomia Denominators)	H

Surds	MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)	H
	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	
W	MF13.07	Combination of Indices	
ndices	MH13.08	Fractional Indices 1: Square and Cube Root	$oldsymbol{oldsymbol{H}}$
_	MH13.09	Fractional Indices 2: Non-Unit Fraction	$lackbox{H}$
	MH13.10	Fractional Indices 3: Negative Unit Fractions	$oldsymbol{H}$
	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions	$oldsymbol{oldsymbol{H}}$
	MH13.12	Fractional Indices 5: Fraction Base	$oldsymbol{H}$
	MH13.13	Fractional Indices: Calculator	$oldsymbol{oldsymbol{H}}$
	MH13.14	Solving Problems with Indices 1: Combination of Rules	$oldsymbol{oldsymbol{H}}$
	MH13.15	Solving Problems with Indices 2: Combination of Rules	$oldsymbol{oldsymbol{H}}$
	MF14.01	The Positive Powers of 10	
E	MF14.02	The Negative Powers of 10	
rd For	MF14.03	Standard Form to Ordinary	
Standard Form	MF14.04	Ordinary to Standard Form	
ίΛ	MF14.05	Fixing into Standard Form	
	MF14.06	Ordering Standard Form	

Ε	MF14.07	Adding and Subtracting with Standard Form
Standard Form	MF14.08	Multiplying with Standard Form
andar	MF14.09	Dividing with Standard Form
ζ	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
0	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

	MF15.19	Ratio: Angles	
Ratio	MF15.20	Ratio: Applied	
Ra	MH15.21	Ratio: Applied (Advanced)	H
	MH15.22	Ratio: Changing Ratios	$oldsymbol{H}$
	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	
Ratio and Proportion	MF16.08	Inverse Proportion 2: y = k/x	
Prop	MF16.09	Proportions on a Graph	
io and	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence	
Rat	MH16.10	Direct Proportion 3: $y = kx^a$ and $y = k\sqrt{x}$	$lackbox{H}$
	MH16.11	Inverse Proportion 3: $y = k/x^a$ and $y = k\sqrt{x}$	$lackbox{\textbf{H}}$
	MH16.12	Interpreting Direct and Inverse Proportion 1: $y = kx$ and $y = k/x^a$	$oldsymbol{oldsymbol{H}}$
	MH16.13	Interpreting Direct and Inverse Proportion 2: Problem Solving	H
	MH16.14	Proportions on a Graph 2: Linear, Quadratic, Cubic and Root	H
	MH16.15	Two Step Direct and Inverse Proportion	H

	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)	
<u>e</u>	MF17.07	Simplifying Expressions 1: Multiplication	
Introduction to Algebra	MF17.08	Simplifying Expressions 2: Multiplication (In Context)	
on to	MF17.09	Simplifying Expressions 3: Division	
ductio	MF17.10	Simplifying Expressions 4: Division	
Intro	MF17.11	Simplifying Expressions 5: Multiplication and Division	
	MH17.17	Simplifying Expressions 6: Index Laws	$oldsymbol{oldsymbol{H}}$
	MH17.18	Simplifying Expressions 7: Index Laws	$oldsymbol{H}$
	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	
pu _	MF18.25	Expanding Single Brackets: Introduction	
panding ar Factorising	MF18.01	Expanding Single Brackets 1: $a(x \pm b)$	
Expanding and Factorising	MF18.02	Expanding Single Brackets 2: $\pm a(x \pm b)$	
û	MF18.03	Expanding Single Brackets 3: $\pm a(\pm bx \pm cy)$	

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Solving Linear Equations

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	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)	$oldsymbol{oldsymbol{artheta}}$
	MH18.19	Expanding More Brackets	$lackbox{H}$
	MF18.15	Factorising Quadratics 1: $(x + a)(x + b)$	
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	MH18.20	Factorising Quadratics 3: $(ax \pm b)(x \pm c)$	H
	MH18.21	Factorising Quadratics 4: $(ax \pm b)(x \pm c)$	H
	MH18.22	Factorising Quadratics 5: $(ax \pm b)(x \pm c)$	H
	MH18.23	Factorising Quadratics 6: $(ax \pm b)(cx \pm d)$	H
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	MF18.17	The Difference of Two Squares	
	MF19.30	Solving Equations: One Step Modelling (+ -)	
	MF19.01	Solving Equations: One Step (+ –)	
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	ns
	Equation
	Linear
	Solving

	MF19.31	Solving Equations: One Step Modelling (× $\div$ )
	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 $ax - b = c$
	MF19.08	Solving Equations: Two Steps (x/a) $\pm$ b = c
<del> </del> 	MF19.09	Solving Equations: Two Steps (x $\pm$ a)/b = c
) i n	MF19.10	Solving Equations: Two Steps (Unknown as Denominator)
	MF19.11	Solving Equations: Two Steps (Negative Unknown)
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	MF19.13	Solving Equations: Three Steps (Unknown on One Side)
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atic Ec	MH20.07	Quadratic Formula 2: Applying the Formula	H
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Sol	MH20.10	Quadratic Formula 5: In Context	$oldsymbol{H}$
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	MH20.13	Solving Quadratics 7: Challenge	$lackbox{H}$
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Squar	MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$	H
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ပိ	MH53.07	Completing the Square to Solve Equations 3: $ax^2 + bx + c$	$lackbox{H}$
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Alge	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)	H
	MH54.08	Algebraic Fractions 8: Multiply	H
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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)	
tions	MF40.13	Describing Enlargements with an Integer Scale Factor	
Transformations	MF40.14	Describing Enlargements with a Non-Integer Scale Factor	
Tran	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	$oldsymbol{\mathbb{H}}$
	MH57.01	Angle in a Semicircle and Angle at Tangent	$oldsymbol{\mathbb{H}}$
	MH57.02	Properties of Diameter and Radii	$oldsymbol{\mathbb{H}}$
	MH57.03	Tangents from an External Point	$oldsymbol{\mathbb{H}}$
rems	MH57.04	Angles at the Centre	$oldsymbol{\mathbb{H}}$
Circle Theorems	MH57.05	Angles on the Same Arc	$oldsymbol{\mathbb{H}}$
Circle	MH57.06	Angles at the Centre and on the Same Arc	$oldsymbol{\mathbb{H}}$
	MH57.07	Cyclic Quadrilaterals	$oldsymbol{\mathbb{H}}$
	MH57.08	Alternate Segment Theorem	$oldsymbol{\mathbb{H}}$
	MI57.13	Intersecting Chord Theorem	$oldsymbol{\mathbb{H}}$

	MI57.14	Intersecting Secant Theorem	H
	MH57.09	Mixed Circle Theorems 1: Practice	H
πs	MH57.10	Mixed Circle Theorems 2: Algebra	H
leorei	MH57.11	Mixed Circle Theorems 3: Two Theorems	H
Circle Theorems	MH57.12	Mixed Circle Theorems 4: Challenge	H
ซั้	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
	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	
tors	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

	MF42.01	Constructing Circles	
Loci	MF42.02	Constructing an Equilateral Triangle	
n and	MI42.10	Constructing Triangles	H
Construction and Loci	MF42.03	Perpendicular Bisector	
Const	MF42.04	Angle Bisector	
	MF42.06	Constructing Angles (30°, 45°, 60°, 90°)	
	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	
Similarity	MF43.05	Similar Triangles 1: Same Orientation	
Simil	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
	MF44.01	Pythagoras' Theorem	
	MF44.02	Pythagoras: Finding the Hypotenuse	
Pythagoras	MF44.03	Pythagoras: Finding a Short Side	
Pytha	MF44.04	Pythagoras: Mixed Sides	
	MF44.05	Pythagoras: Using Coordinates	
	MF44.06	Pythagoras: Worded Questions	

Pythagoras	MF44.07	Pythagoras: Applied Questions	
	MF45.01	Introduction to SOHCAHTOA	
<u>&gt;</u>	MF45.02	Trigonometry: Using a Calculator	
nomet	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)	
Trigol	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)	
ngled	MF45.05	Trigonometry: Missing Angle	
Right-Angled Trigonometry	MF45.06	Trigonometry: Worded Questions	
œ e	MF45.07	Exact Trigonometric Values	
	MF45.08	Trigonometry and Pythagoras	
	MH58.01	Area using ½ (ab) sin (C): Proof	$oldsymbol{oldsymbol{H}}$
	MH58.02	1/2 (ab) sin (C): Finding the area	$lackbox{H}$
	MH58.03	1/2 (ab) sin (C): Area with Missing Value	$lackbox{H}$
	MH58.04	1/2 (ab) sin (C): Applied	$lackbox{H}$
etry	MH58.05	Sine Rule: Proof	$lackbox{H}$
onomo	MH58.06	Sine Rule: Sides	$oldsymbol{oldsymbol{H}}$
d Trigo	MH58.07	Sine Rule: Angles	$oldsymbol{oldsymbol{H}}$
Advanced Trigonometry	MH58.08	Sine Rule: Applied	$oldsymbol{oldsymbol{H}}$
Adv	MH58.09	Cosine Rule: Proof	$lackbox{H}$
	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
4 Trigo	MH58.16	Mixed Trigonometry 3: Multi-Step Problems	H
ancec	MH58.17	Mixed Trigonometry 4: Non-Calculator	H
Adv	MH58.18	Mixed Trigonometry 5: Bearings	H
	MH59.01	3D Pythagoras 1: Cuboids	H
metry	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	H
gonoi	MH59.03	3D SOH CAH TOA	H
3D Trigonometry	MH59.04	3D Trigonometry	H
	MH59.05	3D Trigonometry: Problem Solving	H
	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	
bility	MF46.07	Sample Spaces	
Probability	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)	

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)	$lackbox{H}$
MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)	$oldsymbol{oldsymbol{H}}$
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	$oldsymbol{H}$
MH46.28	Tree Diagrams 13: Solving Equations	$oldsymbol{H}$
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	
	MF46.14 MF46.15 MF46.16 MF46.17 MH46.20 MH46.21 MH46.22 MH46.23 MH46.24 MH46.25 MH46.26 MH46.27 MH46.28 MF47.01 MF47.02 MF47.03 MF47.04 MI47.22 MI47.24	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  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  MI47.24 Subsets: Problem Solving

	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)	$lackbox{H}$
(0	MH47.14	Venn Diagrams: Complements	$oldsymbol{oldsymbol{H}}$
grams	MH47.15	Venn Diagrams with Algebra	$oldsymbol{oldsymbol{H}}$
ın Dia	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams	
Sets and Venn Diagrams	MF47.11	Probabilities with Venn Diagrams 2: 2-Set Diagrams (A given B)	
Sets a	MH47.16	Probabilities with Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	$lackbox{H}$
	MH47.17	Probabilities with Venn Diagrams 4: 3-Set Diagrams (Constructing)	$lackbox{H}$
	MH47.18	Probabilities with Venn Diagrams 5: 3-Set Diagrams (A given B)	$oldsymbol{oldsymbol{H}}$
	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)	
	MH47.19	Shading Venn Diagrams 2: 2-Set Diagrams (From Set Notation)	$oldsymbol{oldsymbol{H}}$
	MH47.20	Shading Venn Diagrams 3: 3-Set Diagrams (From Set Notation)	$oldsymbol{oldsymbol{H}}$
	MF48.01	Hypotheses, Primary Data and Secondary Data	
ata	MF48.02	Discrete and Continuous Data	
ng Da	MF48.03	Tally Chart	
Collecting Data	MF48.04	Questionnaires	
ŏ	MF48.05	Types of Random Sampling	
	MF48.06	Fair Samples	

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Data

ng	MF48.07	Grouped Tally Charts: Discrete and Continuous
	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

	MF50.03	Pictograms	
	MF50.04	Bar Charts	
	MF50.05	Multiple and Composite Bar Charts	
	MF50.06	Vertical Line Graphs	
Data	MF50.09	Creating Pie Charts (No Calculator)	
Displaying Data	MF50.10	Creating Pie Charts (Calculator)	
Displa	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	
হ	MH60.01	Cumulative Frequency 1: Calculating	H
» Plo	MH60.02	Cumulative Frequency 2: Drawing	$oldsymbol{H}$
Cumulative Frequency and Box Plots	MH60.03	Cumulative Frequency 3: Calculating Frequency	$oldsymbol{H}$
ency a	MH60.04	Cumulative Frequency 4: Finding Values	H
reque	MH60.05	Cumulative Frequency 5: Median	$oldsymbol{H}$
ative F	MH60.06	Cumulative Frequency 6: Quartiles	$oldsymbol{H}$
umule	MH60.07	Cumulative Frequency 7: Interquartile Range	H
Ō	MH60.08	Cumulative Frequency 8: Plot and Evaluate	H
sm	MH61.01	Frequency Density 1: Calculating	$oldsymbol{H}$
Histograms	MH61.02	Frequency Density 2: Problem Solving	H
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	$oldsymbol{oldsymbol{H}}$
	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)	$oldsymbol{oldsymbol{artheta}}$
	MH61.08	Histograms 6: Finding Fractions and Percentages	$oldsymbol{oldsymbol{H}}$
	MH61.09	Histograms 7: Finding Proportions	$oldsymbol{oldsymbol{artheta}}$
	MH61.10	Histograms 8: Median	$oldsymbol{H}$
	MH61.11	Histograms 9: Mean	$oldsymbol{H}$
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)	$oldsymbol{oldsymbol{H}}$

# 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.





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	
Solving Quadratic Equations	14	
Completing the Square	9	
Algebraic Fractions	13	
Formulae	11	
Algebraic Proof	4	
Functions	19	
Sequences	22	
Straight Line Graphs	26	
Quadratic and Other Graphs	36	
Inequalities	23	
Calculus	11	E
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	16
Vectors	14
Construction and Loci	10
Similarity	10
Pythagoras	7
Right-Angled Trigonometry	10
Advanced Trigonometry	18
3D Trigonometry	5
Probability	28
Sets and Venn Diagrams	24
Collecting Data	7
Analysing Data	21
Displaying Data	18
Cumulative Frequency and Box Plots	15
Histograms	12

## **Nuggets**

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





Strand	Code	Nugget Name	Course
	MF0.01	Diagnostic: Number 1	
	MF0.02	Diagnostic: Algebra 1	
	MF0.30	Diagnostic: Ratio and Proportion 1	
	MF0.03	Diagnostic: Geometry 1	
Diagnostics	MF0.04	Diagnostic: Number 2	
Diagn	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	
	MH0.09	Diagnostic: Number 3	E
S	MH0.10	Diagnostic: Number 4	E
nostic	MH0.11	Diagnostic: Algebra 3	E
Diagi	MH0.12	Diagnostic: Algebra 4	E
Higher Diagnostics	MH0.13	Diagnostic: Algebra 5	E
I	MH0.32	Diagnostic: Ratio and Proportion 3	E
	MH0.14	Diagnostic: Geometry 3	E

Higher Diagnostics	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	E
	MH0.16	Diagnostic: Statistics 2	E
Diagr	MH0.17	Diagnostic: Probability 2	E
ligher	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	E
I	MI0.19	Diagnostic: Calculus	E
	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
nber	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator	
S: Nul	MF00.07	Topic Diagnostic: Fractions	
Topic Diagnostics: Number	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction	
Diag	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division	
Topic	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

	MF00.15	Topic Diagnostic: Bounds 1	
	MH00.04	Topic Diagnostic: Bounds 2	E
	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest	
ber	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse	
Num	MH00.05	Topic Diagnostic: Exponential Growth and Decay	E
ostics:	MF00.18	Topic Diagnostic: Powers and Roots	
Jiagno	MH00.06	Topic Diagnostic: Surds	E
Topic Diagnostics: Number	MF00.19	Topic Diagnostic: Laws of Indices 1	
F	MH00.07	Topic Diagnostic: Laws of Indices 2	E
	MH00.08	Topic Diagnostic: Fractional Indices	E
	MH00.09	Topic Diagnostic: Solving Problems with Indices	E
	MF00.20	Topic Diagnostic: Standard Form	
	MF00.21	Topic Diagnostic: Ratio	
5	MF00.22	Topic Diagnostic: Ratio: Sharing 1	
Topic Diagnostics: Ratio and Proportion	MH00.10	Topic Diagnostic: Ratio: Sharing 2	E
Diagn Id Pro	MF00.23	Topic Diagnostic: Proportion	
opic I	MI00.01	Topic Diagnostic: Direct and Inverse Proportion 1	©
Ra T	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	E
	MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	E
ic stics:	MF00.25	Topic Diagnostic: Simple Algebra	
Topic Diagnostics: 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	E
	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	E
	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
	MH00.14	Topic Diagnostic: The Quadratic Formula	E
gebra	MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	E
cs: Alç	MH00.16	Topic Diagnostic: Completing the Square	E
Topic Diagnostics: Algebra	MH00.17	Topic Diagnostic: Algebraic Fractions	E
ic Diag	MF00.32	Topic Diagnostic: Formulae	
Top	MH00.18	Topic Diagnostic: Algebraic Proof	E
	MH00.19	Topic Diagnostic: Functions	E
	MH00.20	Topic Diagnostic: Composite Functions	E
	MH00.21	Topic Diagnostic: Inverse Functions	E
	MF00.33	Topic Diagnostic: Sequences	
	MH00.22	Topic Diagnostic: Quadratic Sequences	E
	MF00.34	Topic Diagnostic: Inequalities	
	MF00.35	Topic Diagnostic: Solving Inequalities 1	
	MH00.23	Topic Diagnostic: Solving Inequalities 2	E

	MI00.02	Topic Diagnostic: Coordinates	<u>C</u>
	MF00.36	Topic Diagnostic: Coordinates	E
	MF00.37	Topic Diagnostic: Straight Line Graphs 1	
shq	MH00.24	Topic Diagnostic: Straight Line Graphs 2	E
s: Gra	MH00.25	Topic Diagnostic: Inequality Regions	E
nostic	MF00.38	Topic Diagnostic: Quadratic Graphs 1	
Topic Diagnostics: Graphs	MH00.26	Topic Diagnostic: Quadratic Graphs 2	E
Topic	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
	MF00.40	Topic Diagnostic: 2D and 3D Shapes	
	MF00.41	Topic Diagnostic: Angles	
	MF00.42	Topic Diagnostic: Angle Rules	
netry	MF00.43	Topic Diagnostic: Angles in Parallel Lines	
: Geor	MF00.44	Topic Diagnostic: Angles in Polygons	
Topic Diagnostics: Geometry	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	

	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
Topic Diagnostics: Geometry	MF00.53	Topic Diagnostic: Vectors	
ss: Ge	MH00.34	Topic Diagnostic: Geometric Vectors	E
nostic	MF00.54	Topic Diagnostic: Constructions and Loci	
: Diag	MF00.55	Topic Diagnostic: Similarity 1	
Topic	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	
	MF00.59	Topic Diagnostic: Measures 1	
ostics es	MI00.03	Topic Diagnostic: Measures 2	C
Topic Diagnostics: Measures	MF00.60	Topic Diagnostic: Measures 2	E
Popic I M	MF00.61	Topic Diagnostic: Measures of Time	
	MF00.62	Topic Diagnostic: Conversions	

ics:	MF00.63	Topic Diagnostic: Compound Measures: Speed	
c Diagnos' Measures	MI00.04	Topic Diagnostic: Compound Measures: Density	C
Topic Diagnostics: Measures	MF00.64	Topic Diagnostic: Compound Measures: Density	E
Тор	MH00.39	Topic Diagnostic: Velocity-time Graphs	E
ilit A	MF00.65	Topic Diagnostic: Probability 1	
obab	MH00.40	Topic Diagnostic: Probability 2	E
ics: Pr	MF00.66	Topic Diagnostic: Tree Diagrams 1	
gnost	MH00.41	Topic Diagnostic: Tree Diagrams 2	E
Topic Diagnostics: Probability	MF00.67	Topic Diagnostic: Sets and Venn Diagrams 1	
Тор	MH00.42	Topic Diagnostic: Sets and Venn Diagrams 2	E
	MF00.68	Topic Diagnostic: Collecting Data	
	MF00.69	Topic Diagnostic: Displaying Data	
stics	MI00.06	Topic Diagnostic: Averages and the Range	C
Statis	MF00.70	Topic Diagnostic: Averages and the Range	E
Topic Diagnostics: Statistics	MI00.05	Topic Diagnostic: Averages and the Range from a Frequency Table	C
c Diagr	MF00.71	Topic Diagnostic: Averages and the Range from a Frequency Table	E
Topic	MH00.43	Topic Diagnostic: Cumulative Frequency	E
	MH00.44	Topic Diagnostic: Box Plots	E
	MH00.45	Topic Diagnostic: Histograms	E
etic	MF1.01	Addition	
rithme	MF1.02	Subtraction	
Simple Arithmetic	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
etic	MF1.08	Times Tables: 11 and 12
rithme	MF1.09	Commutative Law
Simple Arithmetic	MF1.10	Associative Law
Sim	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
	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
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Solving Using Straight Line Graphs

MF23.17

MF23.03 Midpoint of a Line Segment

MH23.20 Coordinates and Ratios

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MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given	E
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Anal)	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	
Oata	MF49.14	Modal Class from Grouped Frequency Table	E
Analysing Data	MF49.15	Median from Grouped Frequency Table	E
Analy	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data	E
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data	E
	MF49.18	Range from Grouped Frequency Table	E
	MF49.19	Applying Averages and the Range 2: Tables	E
	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	
Data	MF50.03	Pictograms	
Displaying Data	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	
ta	MF50.13	Drawing Scatter Graphs	
Displaying Data	MF50.14	Interpreting Scatter Graphs 1: Introduction	
splayi	MF50.15	Interpreting Scatter Graphs 2: Outliers	
ä	MF50.16	Frequency Polygons: Drawing	
	MF50.17	Frequency Polygons: Interpreting	
	MF50.18	Interpreting Misleading Data Representations	
	MH61.01	Frequency Density 1: Calculating	C
	MH61.03	Histograms 1: Choosing Axes	C
	MH61.04	Histograms 2: Plotting	C
,	MH60.01	Cumulative Frequency 1: Calculating	E
× Plot	MH60.02	Cumulative Frequency 2: Drawing	E
nd Bo	MH60.03	Cumulative Frequency 3: Calculating Frequency	E
Cumulative Frequency and Box Plots	MH60.04	Cumulative Frequency 4: Finding Values	E
	MH60.05	Cumulative Frequency 5: Median	E
	MH60.06	Cumulative Frequency 6: Quartiles	E
	MH60.07	Cumulative Frequency 7: Interquartile Range	E
	MH60.08	Cumulative Frequency 8: Plot and Evaluate	E

	MI60.15	Cumulative Frequency 9: Percentiles	E
СŻ	MH60.09	Box Plots 1: Interpret	E
equen lots	MH60.10	Box Plots 2: Finding Values to Plot	E
Cumulative Frequency and Box Plots	MH60.11	Box Plots 3: Draw from List	E
mulati and	MH60.12	Box Plots 4: Draw from Data	E
Cul	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
Histograms	MH61.06	Histograms 4: Calculating Frequency within a Given Range	E
Histo	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.





### 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	

Mathematics IGCSE: Cambridge Core & Extended

Solving Linear Equations	33	
Solving Quadratic Equations	14	
Completing the Square	9	
Algebraic Fractions	13	
Formulae	11	
Algebraic Proof	4	
Functions	19	
Sequences	22	
Straight Line Graphs	26	
Quadratic and Other Graphs	36	
Inequalities	23	
Calculus	11	E
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	16
Vectors	14
Construction and Loci	10
Similarity	10
Pythagoras	7
Right-Angled Trigonometry	10
Advanced Trigonometry	18
3D Trigonometry	5
Probability	28
Sets and Venn Diagrams	24
Collecting Data	7
Analysing Data	21
Displaying Data	18
Cumulative Frequency and Box Plots	15
Histograms	12

## **Nuggets**

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

Core Only

**E** Extended Only

Strand	Code	Nugget Name	Course
	MF0.01	Diagnostic: Number 1	
	MF0.02	Diagnostic: Algebra 1	
	MF0.30	Diagnostic: Ratio and Proportion 1	
	MF0.03	Diagnostic: Geometry 1	
S	MF0.04	Diagnostic: Number 2	
Diagnostics	MF0.05	Diagnostic: Probability 1	
Die	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
	MH0.09	Diagnostic: Number 3	E
CS	MH0.10	Diagnostic: Number 4	E
gnost	MH0.11	Diagnostic: Algebra 3	E
Extended Diagnostics	MH0.12	Diagnostic: Algebra 4	E
tende	MH0.13	Diagnostic: Algebra 5	E
Ж	MH0.32	Diagnostic: Ratio and Proportion 3	E
	MH0.14	Diagnostic: Geometry 3	E

Extended Diagnostics	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	E
	MH0.16	Diagnostic: Statistics 2	E
	MH0.17	Diagnostic: Probability 2	E
ende	MH0.18	Diagnostic: Geometry - Advanced Trigonometry	E
Ä	MI0.19	Diagnostic: Calculus	E
	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
mber	MF00.06	Topic Diagnostic: BIDMAS and Using a Calculator	
S: Nul	MF00.07	Topic Diagnostic: Fractions	
Topic Diagnostics: Number	MF00.08	Topic Diagnostic: Fractions: Addition and Subtraction	
Diag	MF00.09	Topic Diagnostic: Fractions: Multiplication and Division	
Topic	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

	MF00.15	Topic Diagnostic: Bounds 1	
	MH00.04	Topic Diagnostic: Bounds 2	E
	MF00.16	Topic Diagnostic: Percentages: Increase, Decrease and Interest	
ber	MF00.17	Topic Diagnostic: Percentages: Change, Error and Reverse	
Nu	MH00.05	Topic Diagnostic: Exponential Growth and Decay	E
ostics:	MF00.18	Topic Diagnostic: Powers and Roots	
Diagno	MH00.06	Topic Diagnostic: Surds	E
Topic Diagnostics: Number	MF00.19	Topic Diagnostic: Laws of Indices 1	
-	MH00.07	Topic Diagnostic: Laws of Indices 2	E
	MH00.08	Topic Diagnostic: Fractional Indices	E
	MH00.09	Topic Diagnostic: Solving Problems with Indices	E
	MF00.20	Topic Diagnostic: Standard Form	
	MF00.21	Topic Diagnostic: Ratio	
5	MF00.22	Topic Diagnostic: Ratio: Sharing 1	
Topic Diagnostics: Ratio and Proportion	MH00.10	Topic Diagnostic: Ratio: Sharing 2	E
Diagn Id Pro	MF00.23	Topic Diagnostic: Proportion	
opic I	MI00.01	Topic Diagnostic: Direct and Inverse Proportion 1	<b>©</b>
_ %	MF00.24	Topic Diagnostic: Direct and Inverse Proportion 1	E
	MH00.11	Topic Diagnostic: Direct and Inverse Proportion 2	E
oic ostics: bra	MF00.25	Topic Diagnostic: Simple Algebra	
Topic Diagnostics: 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	E
	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	E
	MF00.31	Topic Diagnostic: Solving Quadratic Equations 1	
	MH00.14	Topic Diagnostic: The Quadratic Formula	E
gebra	MH00.15	Topic Diagnostic: Solving Quadratic Equations 2	E
cs: Alg	MH00.16	Topic Diagnostic: Completing the Square	E
Topic Diagnostics: Algebra	MH00.17	Topic Diagnostic: Algebraic Fractions	E
c Diag	MF00.32	Topic Diagnostic: Formulae	
Topi	MH00.18	Topic Diagnostic: Algebraic Proof	E
	MH00.19	Topic Diagnostic: Functions	E
	MH00.20	Topic Diagnostic: Composite Functions	E
	MH00.21	Topic Diagnostic: Inverse Functions	E
	MF00.33	Topic Diagnostic: Sequences	
	MH00.22	Topic Diagnostic: Quadratic Sequences	E
	MF00.34	Topic Diagnostic: Inequalities	
	MF00.35	Topic Diagnostic: Solving Inequalities 1	
	MH00.23	Topic Diagnostic: Solving Inequalities 2	E

	MI00.02	Topic Diagnostic: Coordinates	C
	MF00.36	Topic Diagnostic: Coordinates	E
	MF00.37	Topic Diagnostic: Straight Line Graphs 1	
phs	MH00.24	Topic Diagnostic: Straight Line Graphs 2	E
s: Gra	MH00.25	Topic Diagnostic: Inequality Regions	E
nostic	MF00.38	Topic Diagnostic: Quadratic Graphs 1	
Topic Diagnostics: Graphs	MH00.26	Topic Diagnostic: Quadratic Graphs 2	E
Topic	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
	MF00.40	Topic Diagnostic: 2D and 3D Shapes	C
	MI00.19	Topic Diagnostic: 2D and 3D Shapes	E
	MF00.41	Topic Diagnostic: Angles	
ξ	MF00.42	Topic Diagnostic: Angle Rules	
Topic Diagnostics: Geometry	MF00.43	Topic Diagnostic: Angles in Parallel Lines	
ics: G	MF00.44	Topic Diagnostic: Angles in Polygons	
ignost	MF00.45	Topic Diagnostic: Perimeter	
oic Dia	MF00.46	Topic Diagnostic: Area	
Тор	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	

	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
etry	MI00.18	Topic Diagnostic: Vectors	C
Geom	MF00.53	Topic Diagnostic: Vectors	E
stics: (	MH00.34	Topic Diagnostic: Geometric Vectors	E
iagno	MF00.54	Topic Diagnostic: Constructions and Loci	
Topic Diagnostics: Geometry	MF00.55	Topic Diagnostic: Similarity 1	
욘	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	
	MF00.59	Topic Diagnostic: Measures 1	
Topic Diagnostics: Measures	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	
		-	

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
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
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
MH00.45	Topic Diagnostic: Histograms	E
MF1.01	Addition	
MF1.02	Subtraction	
MF1.03	Addition and Subtraction	
MF1.04	Times Tables: 2, 5 and 10	
	MI00.04 MF00.64 MH00.39 MF00.65 MH00.40 MF00.66 MH00.41 MF00.67 MH00.42 MF00.68 MF00.69 MI00.06 MF00.70 MI00.05 MF00.71 MH00.43 MH00.45 MF1.01 MF1.02	MI00.04 Topic Diagnostic: Compound Measures: Density  MF00.64 Topic Diagnostic: Compound Measures: Density  MH00.39 Topic Diagnostic: Velocity-time Graphs  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  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  MF1.01 Addition  MF1.02 Subtraction

-	MF1.05	Times Tables: 3 and 4
	MF1.06	Times Tables: 6 and 7
	MF1.07	Times Tables: 8 and 9
eţic	MF1.08	Times Tables: 11 and 12
rithme	MF1.09	Commutative Law
Simple Arithmetic	MF1.10	Associative Law
Sim	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
	MF2.01	Integer Place Value
	MF2.02	Mathematical Symbols
	MF2.03	Negative Numbers
	MF2.04	Symmetrical Subtraction
ber	MF2.05	Adding Negatives
Num	MF2.06	Subtracting Negatives
Understanding Number	MF2.07	Negatives and Positives
dersta	MF2.08	Ordering Integers
ng -	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	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
us	MF3.10	Testing for Divisibility
eratio	MF3.11	Short Division
Four Operations	MF3.19	Long Division
Fou	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
suo	MF4.01	Expressing Fractions
Working with Fractions	MF4.02	Ordering Fractions
with F	MF4.03	Equivalent Fractions
king	MF4.04	Simplifying Fractions
Worl	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
	MF4.13	Adding Improper Fractions
suc	MF4.14	Adding Mixed Numbers
Working with Fractions	MF4.15	Adding Improper Fractions and Mixed Numbers
with F	MF4.16	Subtracting Improper Fractions
rking	MF4.17	Subtracting Mixed Numbers
<sup>™</sup>	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	
	MF4.39	Fraction of Amounts: Modelling	
Suc	MF4.29	Fraction of Amounts: Non-Calculator	
ractio	MF4.30	Fraction of Amounts: Calculator	
with F	MF4.31	Increasing and Decreasing by Fractions	
Working with 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	E
	MF5.01	Odds and Evens with Addition and Subtraction	
	MF5.02	Odds and Evens with Multiplication	
rimes	MF5.03	Primes	
and F	MF5.04	Multiples	
Factors, Multiples and Primes	MF5.05	Factors	
	MF5.06	Multiples and Factors	
-actor	MF5.07	Lowest Common Multiple - Listing Technique	
ш -	MF5.08	Highest Common Factor - Listing Technique	
	MF5.09	Prime Factorisation 1: Factor Tree Given	

rimes -	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	
and F	MF5.14	LCM Using Prime Factorisation: Venn Diagrams	
Factors, Multiples and Primes	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors	
s, Mul	MF5.16	HCF and LCM with Prime Factorisation	
actor	MH5.17	HCF and LCM of 3 Numbers	E
	MH5.18	Solving Problems with HCF and LCM 1	E
	MH5.19	Solving Problems with HCF and LCM 2	E
	MH5.20	Solving Problems with HCF and LCM 3: Reverse	E
	MF6.01	Decimal Place Value	
	MF6.02	Adding Decimals 1: Calculations	
	MF6.03	Adding Decimals 2: Worded Problems	
als	MF6.04	Subtracting Decimals 1: Calculations	
Working with Decimals	MF6.05	Subtracting Decimals 2: Worded Problems	
with [	MF6.06	Multiplying Decimals 1	
ırking	MF6.07	Multiplying Decimals 2	
Wol	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
N O	MF6.14	Multiplying Decimals with Napier's Bones
	MF7.01	Understanding Percentages
	MF7.02	Finding 50%
	MF7.03	Finding 25%
	MF7.04	Finding 10%
<u>O</u>	MF7.05	Finding 5%
Introduction to Percentages (NC)	MF7.06	Finding 1%
centaç	MF7.07	Finding Multiples of Tens in Percentages
o Perc	MF7.15	Percentages of Amounts: Modelling
tion t	MF7.08	Finding Percentages of Amounts 1
roduc	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
mals	MF8.01	Introduction to Fractions, Decimals and Percentages
Fractions, Decimals and Percentages	MF8.02	Converting Fractions to Denominator 100
tions, d Perc	MF8.03	Fractions to Percentage
Fract	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	
10	MF8.09	Decimals to Fractions	
ıtages	MF8.10	Fractions to Decimals (Calculator)	
Percer	MF8.11	Fractions to Percentages (Calculator)	
and F	MF8.12	Percentage to Fractions (Calculator)	
cimals	MF8.13	Decimals to Fractions (Calculator)	
Fractions, Decimals and Percentages	MF8.14	Ordering Fractions, Decimals and Percentages 1: Unit Fractions (Non-Calculator)	
Fractio	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%)	
	MH51.01	Fractions to Recurring Decimals 1: Special Cases	E
imals	MH51.02	Fractions to Recurring Decimals 2: Long Division	E
Recurring Decimals	MH51.03	Fractions to Recurring Decimals 3: Long Division (Numbers > 1)	E
Recuri	MH51.04	Recurring Decimals 1: 1–2 Digits	E
_	MH51.05	Recurring Decimals 2: 2–4 Digits	E

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
	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	
б	MF9.09	Mixed Rounding	
Rounding	MF9.10	Rounding to Appropriate Degrees of Accuracy	
ŭ	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
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	MH32.17	Arc Length 3: Reverse	E
	MF32.15	Area of a Sector 1	
	MH32.18	Area of a Sector 2: Reverse	E
	MF32.16	Area and Perimeter of Composite Shapes with Sectors 1	
	MH32.19	Area and Perimeter of Composite Shapes with Sectors 2: Problem Solving	E

		MF33.01	Planes of Symmetry	
	apes	MF33.02	Nets of Cubes	
3D St	3D Shapes	MF33.03	Plans and Elevations with Cuboids	
		MF33.04	Plans and Elevations	
		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	
	Volume	MF34.09	Volume of Part Cylinders	
	Volu	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	E
		MH34.18	Volume of Frustums	E

	MF35.01	Surface Area of Cuboids	
	MF35.02	Surface Area of Prisms	
	MF35.03	Surface Area of Cylinders	
rea	MF35.04	Surface Area of Part Cylinders	
Surface Area	MF35.05	Surface Area of Spheres	
Surf	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	E
	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)	
ø	MF36.06	Converting Metric Length: Worded Questions	
Measure	MF36.07	Converting Metric Mass (One Step)	
Σ	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)
Φ	MF36.17	Metric and Imperial Length (Calculator)
Measure	MF36.18	Metric and Imperial Mass and Volume (No Calculator)
Σ	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
эеу	MF37.05	Converting Time: Seconds, Minutes and Hours
M Mor	MF37.06	Converting Time: Days, Weeks and Years
Time and Money	MF37.07	Calendar Months
F	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

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			
		_		

Sompound Measure	MH38.23	Velocity-Time Graph: Distance	E
	MH38.24	Velocity-Time Graph: Acceleration	E
Ö≥	MH38.25	Velocity-Time Graph: Problem Solving	E
	MF39.01	Using Scales with Units	
	MF39.02	Finding Scales with Units	
sbu	MF39.03	Using Scales without Units	
Scale Drawings and Bearings	MF39.04	Finding Scales without Units	
sand	MF39.05	Using Scales on a Map	
awing	MF39.10	Creating Scale Diagrams	
le Dra	MF39.06	Introduction to Bearings	
Sca	MF39.07	Bearings from North	
	MF39.08	Finding Bearings 1	
	MF39.09	Finding Bearings 2: Using Co-interior Angles	
	MF40.01	Introduction to Reflection	
	MF40.02	Finding the Line of Reflection	
	MF40.03	Coordinates in Reflection	
tions	MF40.04	Translating a Point	
Transformations	MF40.05	Translating a Shape	
Transi	MF40.06	Describing Translations	
	MF40.07	Enlarging Shapes	
	MF40.08	Enlargements with 0 <sf<1< td=""><td></td></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
ions	MF40.13	Describing Enlargements with an Integer Scale Factor	
Transformations	MF40.14	Describing Enlargements with a Non-Integer Scale Factor	
Tran	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
Circle Theorems	MH57.03	Tangents from an External Point	E
	MH57.04	Angles at the Centre	E
Circle	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
SW	MH57.09	Mixed Circle Theorems 1: Practice	E
Theore	MH57.10	Mixed Circle Theorems 2: Algebra	E
Circle Theorems	MH57.11	Mixed Circle Theorems 3: Two Theorems	E
O	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
	MF42.01	Constructing Circles	
	MF42.02	Constructing an Equilateral Triangle	
	MI42.10	Constructing Triangles	
Loci	MF42.03	Perpendicular Bisector	
Construction and Loci	MF42.04	Angle Bisector	
ructio	MF42.05	Perpendicular from a Point to a Line	
Const	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	
	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	
arity	MF43.05	Similar Triangles 1: Same Orientation	
Similarity	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

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

	MH58.06	Sine Rule: Sides	E
	MH58.07	Sine Rule: Angles	E
	MH58.08	Sine Rule: Applied	E
	MH58.09	Cosine Rule: Proof	E
etry	MH58.10	Cosine Rule: Finding a	E
поте	MH58.11	Cosine Rule: Finding A	E
Advanced Trigonometry	MH58.12	Cosine Rule: Applied	E
ancec	MH58.13	Choosing the Correct Trigonometric Rule	E
Adv	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
netry	MH59.02	3D Pythagoras 2: Pyramids and Cylinders	E
3D Trigonometry	MH59.03	3D SOH CAH TOA	E
SD Tri	MH59.04	3D Trigonometry	E
.,,	MH59.05	3D Trigonometry: Problem Solving	E
	MF46.01	Probability Scale in Words	
oillity	MF46.02	Probability Scale in Numbers	
Probability	MF46.03	Calculating Probability	
ш	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)	
billity	MH46.19	Addition Law of Probability (General OR)	E
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)	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
	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
દા	MI47.24	Subsets: Problem Solving	E
iagran	MF47.05	Introduction to Venn Diagrams	
enn D	MF47.06	Constructing Venn Diagrams 1: Listing Elements	
Sets and Venn Diagrams	MF47.07	Constructing Venn Diagrams 2: Writing Values	
Sets	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
ond V	MF47.08	Shading Venn Diagrams 1: 2-Set Diagrams (From Words)	
Sets	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
	MF48.01	Hypotheses, Primary Data and Secondary Data	
	MF48.02	Discrete and Continuous Data	
Data	MF48.03	Tally Chart	
Collecting Data	MF48.04	Questionnaires	
Colle	MF48.05	Types of Random Sampling	
	MF48.06	Fair Samples	
	MF48.07	Grouped Tally Charts: Discrete and Continuous	
	MF49.01	Mode	
	MF49.02	Median	
Data	MF49.03	Mean 1: Positive Integers	
Analysing Data	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	
Data	MF49.14	Modal Class from Grouped Frequency Table	E
Analysing Data	MF49.15	Median from Grouped Frequency Table	E
Anal	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data	E
	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data	E
	MF49.18	Range from Grouped Frequency Table	E
	MF49.19	Applying Averages and the Range 2: Tables	E
	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	
Data	MF50.03	Pictograms	
Displaying Data	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	
<u></u>	MF50.13	Drawing Scatter Graphs	
ng Da	MF50.14	Interpreting Scatter Graphs 1: Introduction	
Displaying Data	MF50.15	Interpreting Scatter Graphs 2: Outliers	
Dis	MF50.16	Frequency Polygons: Drawing	
	MF50.17	Frequency Polygons: Interpreting	
	MF50.18	Interpreting Misleading Data Representations	
	MH61.01	Frequency Density 1: Calculating	<u>©</u>
	MH61.03	Histograms 1: Choosing Axes	<u>©</u>
	MH61.04	Histograms 2: Plotting	<u>©</u>
	MH60.01	Cumulative Frequency 1: Calculating	E
	MH60.02	Cumulative Frequency 2: Drawing	E
ò	MH60.03	Cumulative Frequency 3: Calculating Frequency	E
uanba	MH60.04	Cumulative Frequency 4: Finding Values	E
ve Fre	MH60.05	Cumulative Frequency 5: Median	E
Cumulative Frequency	MH60.06	Cumulative Frequency 6: Quartiles	E
	MH60.07	Cumulative Frequency 7: Interquartile Range	E
	MH60.08	Cumulative Frequency 8: Plot and Evaluate	E
	MI60.15	Cumulative Frequency 9: Percentiles	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
Histograms	MH61.06	Histograms 4: Calculating Frequency within a Given Range	E
	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 -**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.

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Solving Quadratic Equations	14

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### Nuggets

Strand	Code	Nugget Name
	BR0.01	Diagnostic 1: Essentials
	BR0.02	Diagnostic 2: Essentials
	BR0.03	Diagnostic 3
	BR0.04	Diagnostic 4
Diagnostics	BR0.05	Diagnostic 5: Physics for Mechanics
Diagn	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
ges	MF11.07	Compound Interest (Calculator)
Percentages Calculator	MF11.08	Depreciation (Calculator)
Pe.	MF11.09	Compound Interest and Depreciation (Calculator)

ges	MH11.14	Exponential Growth
Percentages Calculator	MH11.15	Exponential Decay
	MH11.16	Exponential Growth and Decay
	MF12.01	Squares
oots	MF12.02	Cubes
nd Ro	MF12.03	Squaring and Cubing Negatives
Powers and Roots	MF12.04	Powers
Pov	MF12.05	Roots of Squares and Cubes
	MF12.06	Roots
	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)
Surds	MH52.07	Surds: Expanding 1 (Single Bracket)
07	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)
Surds	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
10	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
bra	MF17.08	Simplifying Expressions 2: Multiplication (In Context)
Introduction to Algebra	MF17.09	Simplifying Expressions 3: Division
ion to	MF17.10	Simplifying Expressions 4: Division
oduct	MF17.11	Simplifying Expressions 5: Multiplication and Division
발	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: $(x \pm a)(x \pm b)$
ising	MF18.11	Expanding Double Brackets 2: $(ax \pm b)(cx \pm d)$
-actor	MF18.12	Expanding Double Brackets 3: $(x \pm a)^2$
and F	MF18.13	Expanding Double Brackets 4: $a(bx \pm c)(dx \pm e)$
Expanding and Factorising	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: $(ax \pm b)(x \pm c)$
torisiı	MH18.21	Factorising Quadratics 4: $(ax \pm b)(x \pm c)$
Expanding and Factorising	MH18.22	Factorising Quadratics 5: $(ax \pm b)(x \pm c)$
ng an	MH18.23	Factorising Quadratics 6: $(ax \pm b)(cx \pm d)$
pandi	MH18.24	Factorising Quadratics 7: (ax $\pm$ b)(cx $\pm$ d)
Ä	MF18.17	The Difference of Two Squares
	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)
Ω	MF19.17	Solving Equations: Four Steps (Including Fractions)
Solving Linear Equations	MF19.20	Simultaneous Equations: Introduction
ar Eq	MF19.21	Simultaneous Equations 1
g Line	MF19.22	Simultaneous Equations 2: Scale One Equation
Solving	MF19.23	Simultaneous Equations 3: Scale Both Equations
07	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
ng atic	MF20.01	Solving Quadratics 1: $x^2 + b = 0$
Solving Quadratic Equations	MF20.02	Solving Quadratics 2: ax² + 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
Equ	MH20.08	Quadratic Formula 3: Applying the Formula
dratic	MH20.09	Quadratic Formula 4: Give Answer in Form (p $\pm \sqrt{q}$ )/r
g Qua	MH20.10	Quadratic Formula 5: In Context
olving	MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)
S	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
	MH53.01	Completing the Square 1: $(x + q)^2 + r$
	MH53.02	Completing the Square 2: $(x + q/2)^2 + r$
ē	MH53.03	Completing the Square 3: $p(x + q)^2 + r$
Squa	MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$
ig the	MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$
Completing the Square	MH53.06	Completing the Square to Solve Equations 2: $x^2 + bx + c$ (Including Fractions)
S	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
is ic	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)
Algebraic Fractions	MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)
Alç	MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)

ons	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)
Fract	MH54.08	Algebraic Fractions 8: Multiply
Algebraic Fractions	MH54.09	Algebraic Fractions 9: Multiply
Alge	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
	MF21.03	Using Kinematics
	MF21.04	Recalling and Using Formulae 1
	MH21.11	Recalling and Using Formulae 2
<u>e</u>	MF21.05	Rearranging Formulae: One Step
Formulae	MF21.06	Rearranging Formulae: Two Step
Ω.	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
of	MH55.01	Introduction to Algebraic Proof
Algebraic Proof	MH55.02	Algebraic Proof 1: Complete the Proof
gebrai	MH55.03	Algebraic Proof 2
Alg	MH55.04	Algebraic Proof: Disproving by Example

	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
10	MH56.07	Composite Functions: Substitution 1 (2 Linear Functions)
Functions	MH56.08	Composite Functions: Substitution 2 (2 Non-Linear Functions)
- Fun	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
	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
nces	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
Sednences	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
	MI22.22	Sum of Arithmetic Sequences 2: Reverse
	MF22.10	Important Sequences: Squares, Cubes and Triangular Numbers
	MF22.11	Important Sequences: Geometric
ences	MF22.13	Quadratic Sequences: Using the nth Term
Sednences	MH22.14	Subscript Notation
	MH22.15	Unusual Sequences
	MH22.16	Quadratic Sequences 1: n² + c
	MH22.17	Quadratic Sequences 2: an <sup>2</sup> + c
	MH22.18	Quadratic Sequences 3: an <sup>2</sup> + bn + c
	MH22.19	Quadratic Sequences 4: an <sup>2</sup> + bn + c and (an + b) <sup>2</sup>
	MH23.20	Coordinates and Ratios
	MF23.04	Horizontal and Vertical Graphs
	MF23.05	Other Important Linear Graphs
bhs	MF23.06	Plotting Straight Line Graphs: 1st Quadrant
Straight Line Graphs	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
Grap	MH23.22	Finding Perpendicular Lines 2: Equation
it Line	MH23.23	Finding Perpendicular Lines 3: Problem Solving
Straight Line Graphs	MH23.24	Equation of a Tangent 1: Circle Given
0)	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
	MF24.01	Plotting Simple Quadratic Graphs 1: y = ax <sup>2</sup> + c
	MF24.02	Plotting Simple Quadratic Graphs 2: $y = ax^2 + bx + c$
shs	MF24.03	Quadratic Graphs: Finding the y-intercept
r Grap	MF24.04	Quadratic Graphs: Finding the Line of Symmetry
Quadratic and Other Graphs	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
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
	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
Inequalities	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)
lnedu	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
(0	MF32.13	Arc Length 1: Fractions
Circles	MF32.14	Arc Length 2: Degrees
J	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
	MF38.07	Speed, Distance and Time: Mixed Questions
	MF38.08	Converting Units with Speed, Distance and Time
ō	MF38.19	Distance-Time Graphs: Drawing
leasul	MF38.20	Distance-Time Graphs: Interpreting
Compound Measure	MF38.21	Distance-Time Graphs: Speed
одшо	MH38.22	Velocity-Time Graph: Interpreting
O	MH38.23	Velocity-Time Graph: Distance
	MH38.24	Velocity-Time Graph: Acceleration
	MH38.25	Velocity-Time Graph: Problem Solving
S	MF39.06	Introduction to Bearings
Scale Drawings and Bearings	MF39.07	Bearings from North
ale Di nd Be	MF39.08	Finding Bearings 1
No e	MF39.09	Finding Bearings 2: Using Co-interior Angles
	MH57.01	Angle in a Semicircle and Angle at Tangent
rems	MH57.02	Properties of Diameter and Radii
Circle Theorems	MH57.03	Tangents from an External Point
Circle	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
ems	MI57.14	Intersecting Secant Theorem
Circle Theorems	MH57.09	Mixed Circle Theorems 1: Practice
Circle	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
	MF41.01	Column Vectors
	MF41.01 MF41.02	Column Vectors  Column Vectors: Scalar Multiplication
	MF41.02	Column Vectors: Scalar Multiplication
W	MF41.02 MF41.03	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction
ectors	MF41.02 MF41.03 MF41.04	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction  Column Vectors: Drawing
Vectors	MF41.03 MF41.04 MI41.14	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction  Column Vectors: Drawing  Magnitude of Vectors
Vectors	MF41.03 MF41.04 MI41.14 MF41.05	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction  Column Vectors: Drawing  Magnitude of Vectors  Geometric Vectors 1: One Term
Vectors	MF41.02 MF41.03 MF41.04 MI41.14 MF41.05	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction  Column Vectors: Drawing  Magnitude of Vectors  Geometric Vectors 1: One Term  Geometric Vectors 2: Two Terms
Vectors	MF41.02 MF41.03 MF41.04 MI41.14 MF41.05 MF41.06 MH41.07	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction  Column Vectors: Drawing  Magnitude of Vectors  Geometric Vectors 1: One Term  Geometric Vectors 2: Two Terms  Geometric Vectors 3: Within Shapes
Vectors	MF41.02 MF41.03 MF41.04 MI41.14 MF41.05 MF41.06 MH41.07	Column Vectors: Scalar Multiplication  Column Vectors: Addition and Subtraction  Column Vectors: Drawing  Magnitude of Vectors  Geometric Vectors 1: One Term  Geometric Vectors 2: Two Terms  Geometric Vectors 3: Within Shapes  Geometric Vectors 4: Expand and Simplify

<u>σ</u>	MH41.11	Geometric Vectors 7: Fractions and Ratios
Vectors	MH41.12	Geometric Vectors 8: Parallel Vectors
	MH41.13	Geometric Vectors 9: Proof
	MF44.01	Pythagoras' Theorem
	MF44.02	Pythagoras: Finding the Hypotenuse
Se	MF44.03	Pythagoras: Finding a Short Side
Pythagoras	MF44.04	Pythagoras: Mixed Sides
₹	MF44.05	Pythagoras: Using Coordinates
	MF44.06	Pythagoras: Worded Questions
	MF44.07	Pythagoras: Applied Questions
	MF45.01	Introduction to SOHCAHTOA
	MF45.02	Trigonometry: Using a Calculator
ri y	MF45.03	Trigonometry: Missing Side 1 (Variable is Numerator)
Right-Angled Trigonometry	MF45.04	Trigonometry: Missing Side 2 (Variable is Denominator)
Trigor	MF45.05	Trigonometry: Missing Angle
pelgu	MF45.06	Trigonometry: Worded Questions
ght-Ar	MF45.07	Exact Trigonometric Values
ž.	MF45.08	Trigonometry and Pythagoras
	MI45.09	Shortest Distance
	MI45.10	Simple Trigonometric Equations
Advanced	MH58.01	Area using ½ (ab) sin (C): Proof
Trigonometry	MH58.02	½ (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
	MH58.06	Sine Rule: Sides
	MH58.07	Sine Rule: Angles
	MH58.08	Sine Rule: Applied
metry	MH58.09	Cosine Rule: Proof
rigono	MH58.10	Cosine Rule: Finding a
Advanced Trigonometry	MH58.11	Cosine Rule: Finding A
Advar	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
3D Tr	MH59.04	3D Trigonometry
	MH59.05	3D Trigonometry: Problem Solving

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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
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
	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
grams	MH47.13	Interpreting Venn Diagrams 2: 3-Set Diagrams (From Set Notation)
Sets and Venn Diagrams	MH47.14	Venn Diagrams: Complements
d Ven	MH47.15	Venn Diagrams with Algebra
ets an	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
Ϋ́	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)
ta	MF48.01	Hypotheses, Primary Data and Secondary Data
ng Da	MF48.02	Discrete and Continuous Data
Collecting Data	MF48.05	Types of Random Sampling
ŏ 	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
	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
Plots	MH60.05	Cumulative Frequency 5: Median
Cumulative Frequency and Box Plots	MH60.06	Cumulative Frequency 6: Quartiles
cy and	MH60.07	Cumulative Frequency 7: Interquartile Range
dneuc	MH60.08	Cumulative Frequency 8: Plot and Evaluate
e Fre	MI60.15	Cumulative Frequency 9: Percentiles
nulativ	MH60.09	Box Plots 1: Interpret
Cun	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
	MH61.01	Frequency Density 1: Calculating
SEE	MH61.02	Frequency Density 2: Problem Solving
Histograms	MH61.03	Histograms 1: Choosing Axes
Ξ̈́	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)
ms.	MH61.08	Histograms 6: Finding Fractions and Percentages
Histograms	MH61.09	Histograms 7: Finding Proportions
H;	MH61.10	Histograms 8: Median
	MH61.11	Histograms 9: Mean
	MH61.12	Histograms 10: Mixed Exercise (Consolidates 6-9)
	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
//aths	PHH4.01	Speed and Velocity
s for N	PHH4.02	Acceleration and Deceleration
Physics for Maths	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
snjr	MI62.01	Differentiating Functions 1: Single Term
Calculus	MI62.02	Differentiating Functions 2: Multiple Terms

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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

## 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**

Strand	Code	Nugget Name
	PM0.50	Diagnostic: Number and Place Value
	PM0.51	Diagnostic: Addition and Subtraction
	PM0.52	Diagnostic: Multiplication and Division
S	PM0.53	Diagnostic: Fractions
Diagnostics	PM0.54	Diagnostic: Measurement
Dia	PM0.55	Diagnostic: Money
	PM0.56	Diagnostic: Time
	PM0.57	Diagnostic: Geometry
	PM0.58	Diagnostic: Statistics
	PM10.15	2-Digit: Comparing Numbers with Greater Than and Less Than Symbols $\diamondsuit$
	PM10.16	Reading and Writing Numbers to 20
<u>ne</u>	PM10.17	Reading and Writing Numbers to 100
ace Va	PM10.01	Counting in Multiples of 2
Number and Place Value	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
lace ue	PM1.36	Number Lines to 100
Number and Place Value	PM10.18	Number and Place Value Checkpoint
	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
action	PM2.33	2-Digit: Adding and Subtracting 1s (Not Crossing 10)
Addition and Subtraction	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
	PM3.62	Odd and Even Numbers
	PM3.63	Understanding Multiplication
	PM10.05	Multiplying by 2
	PM10.06	Multiplying by 5
sion	PM10.07	Multiplying by 10
Multiplication and Division	PM3.66	Mixed Multiplication 1 (2s,5s & 10s)
tion ar	PM3.67	Commutativity in Multiplication
tiplica	PM10.08	Dividing by 2
M	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
	PM4.37	Recognising and Finding a Half
Fractions	PM4.38	Recognising and Finding Quarters
Frac	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
	PM5.34	Measuring Mass in Kilograms
4	PM5.35	Solving Problems with Mass
remen	PM5.36	Measuring Volume and Capacity
Measurement	PM5.37	Solving Problems with Volume and Capacity
_	PM5.38	Measuring Temperature
	PM5.39	Measurement Checkpoint
	PM6.11	Counting Money (Pence)
	PM6.12	Counting Money (Pounds)
Money	PM6.15	Making Amounts (Pounds and Pence)
Š	PM6.16	Making the Same Amount
	PM6.14	Finding Change 1 (from £1)
	PM6.17	Money Checkpoint
	PM7.10	Estimating Time
	PM7.19	Units of Time 1
T <u>i</u>	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
Geon	PM8.02	Describing 3D Shapes

Strand	Code	Nugget Name
etry	PM8.08	Patterns and Sequences
	PM8.04	Angles in Turns 1
Geometry	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

## **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**

Strand	Code	Nugget Name
	MPYP0.01	Diagnostic: Number and Place Value
	MPYP0.02	Diagnostic: Addition and Subtraction
	MPYP0.03	Diagnostic: Multiplication and Division
<u>.s</u>	MPYP0.04	Diagnostic: Fractions
Diagnostics	MPYP0.05	Diagnostic: Geometry
Ö	MPYP0.06	Diagnostic: Measurement
	MPYP0.07	Diagnostic: Time
	MPYP0.08	Diagnostic: Money
	MPYP0.09	Diagnostic: Statistics
	PM10.01	Counting in Multiples of 2
	PM10.02	Counting in Multiples of 3
<u>ne</u>	PM10.03	Counting in Multiples of 5
ace Va	PM10.04	Counting in Multiples of 10
Number and Place Value	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
	PM1.05	3-Digit: Recognising Place Value
	PM1.35	2-Digit: Representing Numbers
	PM1.36	Number Lines to 100
enle	PM1.37	Number Lines to 1000
ace V	PM1.06	3-Digit: Representing Numbers up to 1000
Id bue	PM1.38	2-Digit: Finding 10 More or 10 Less
Number and Place Value	PM1.07	3-Digit: Finding 10 More or 10 Less
Ž	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
	PM2.30	Number Bonds to 20
	PM2.31	Number Bonds to 100
_	PM10.11	Single Digit Addition
raction	PM10.13	Single Digit Subtraction
Subti	PM2.32	Adding Three 1-Digit Numbers
Addition and Subtraction	PM2.33	2-Digit: Adding and Subtracting 1s (Not Crossing 10)
	PM2.34	2-Digit: Adding and Subtracting Multiples of 10
7	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
	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
action	PM2.04	3-Digit: Column Addition (no Exchanging)
Subt	PM2.05	3-Digit: Column Addition (with Exchanging)
Addition and Subtraction	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
sion	PM3.62	Odd and Even Numbers
d Divi	PM3.63	Understanding Multiplication
ion an	PM10.05	Multiplying by 2
Multiplication and Division	PM10.06	Multiplying by 5
Mult	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
vision	PM3.07	Dividing by 8
nd Di	PM3.08	Mixed Division
Multiplication and Division	PM3.64	Comparing Statements
plicat	PM3.09	Multiplying Multiples of 10
M E	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
Fractions	PM4.02	Tenths
Frac	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
ents	PM5.04	Mass and Weight
Measurements	PM5.05	Solving Mass Problems
Meas	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
	PM6.11	Counting Money (Pence)
	PM6.12	Counting Money (Pounds)
	PM6.13	Converting Pounds and Pence
	PM6.15	Making Amounts (Pounds and Pence)
Money	PM6.01	Adding Amounts of Money
Š	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
	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
Time	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
	PM8.01	Describing 2D Shapes
	PM8.02	Describing 3D Shapes
≥	PM8.03	Nets of Shapes
Geometry	PM8.04	Angles in Turns 1
Ō	PM8.05	Identifying Angles
	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
Probability	MPYP46.01	Probability Scale in Words
	PM9.17	Venn Diagrams
	PM9.18	Carroll Diagrams
	PM9.19	Tree Diagrams (for Sorting)
Statistics	PM9.16	Tally Charts
Stat	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

**Primary Mathematics – Grade 2** 

## **Primary Mathematics – Grade 3**

3 5

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**

Strand	Code	Nugget Name
	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
Diagnostics	MPYP0.15	Diagnostic: Fractions
Diagn	MPYP0.16	Diagnostic: Measurement
	MPYP0.17	Diagnostic: Time
	MPYP0.18	Diagnostic: Money
	MPYP0.19	Diagnostic: Geometry
	MPYP0.20	Diagnostic: Statistics
	PM10.02	Counting in Multiples of 3
	PM1.01	Counting in Multiples of 4
Value	PM1.12	Counting in Multiples of 6
Place	PM1.13	Counting in Multiples of 7
Number and Place Value	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
Place	PM1.33	Finding 1000 More or 1000 Less
er and	PM1.21	2dp: Recognising Place Value in Decimals
Numb	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)
raction	PM2.15	4-Digit: Column Subtraction (no Exchanging)
Addition and Subtraction	PM2.07	3-Digit: Column Subtraction (with Exchanging)
on and	PM2.16	4-Digit: Column Subtraction (with Exchanging)
Additi	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

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
ion	PM3.21	Multiplying by 12
Multiplication and Division	PM3.22	Mixed Multiplication (Within the Times Tables)
tion an	PM3.05	Dividing by 3
iplicat 	PM3.06	Dividing by 4
M	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
Divisio	PM3.32	Scaling Problems 2
and	PM3.33	Correspondence Problems 1
ication	PM3.34	Correspondence Problems 2
Multiplication and Division	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

**Primary Mathematics – Grade 3** 

Strand	Code	Nugget Name
	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
imals	PM4.08	Finding Fractions of Amounts
Fractions and Decimals	PM4.04	Adding and Subtracting Fractions
ons ar	PM4.02	Tenths
Fracti	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
	PM5.01	Units of Measure
Measurement	PM5.02	Length
Measu	PM5.10	Measuring Length
2	PM5.11	Converting mm and cm

Strand	Code	Nugget Name
	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
Measurement	PM5.05	Solving Mass Problems
/easu	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
	PM7.01	Units of Time
	PM7.02	Times of Day
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		Nugget Name
	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
Time	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
	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
Money	PM6.07	Comparing Amounts of Money
₩ W	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 N	ugget Name
	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
<u>}</u>	PM8.07	Lines of Symmetry
Geometry	MF29.01	Rotational Symmetry
σ	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
v	PM9.17	Venn Diagrams
Statistics	PM9.18	Carroll Diagrams
UI .	PM9.19	Tree Diagrams (for Sorting)

Strand	Code	Nugget Name
	PM9.16	Tally Charts
S	PM9.02	Tables 1
Statistics	PM9.01	Pictograms
<b>5</b> 5	PM9.03	Bar Charts 1
	PM9.04	Line Graphs 1
	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
Catch Up	PM2.32	Adding Three 1-Digit Numbers
Cato	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	
	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
Catch Up	PM10.03	Counting in Multiples of 5
Catc	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
	MPYP19.01	2 - Problem Solving and Reasoning Assessment
End of Year Assessments	MPYP19.02	2 - Arithmetic Assessment
End o Assess	MPYP19.03	3 - Problem Solving and Reasoning Assessment
	MPYP19.04	3 - Arithmetic Assessment

## **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**

Strand Code Nugget Name		Nugget Name
	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
Diagnostics	MPYP0.26	Diagnostic: Fractions, Decimals and Percentages
Diagn	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		Nugget Name
	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
en la	PM1.33	Finding 1000 More or 1000 Less
Number and Place Value	PM1.27	Counting Forwards and Backwards in Powers of 10
and Pi	PM1.18	Negative Numbers 1
nber	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
N	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)
<b>c</b>	PM2.13	4-Digit: Column Addition (no Exchanging)
tractio	PM2.14	4-Digit: Column Addition (with Exchanging)
d Subt	PM2.22	4+ Digit: Column Addition
Addition and Subtraction	PM2.15	4-Digit: Column Subtraction (no Exchanging)
Additi	PM2.16	4-Digit: Column Subtraction (with Exchanging)
	PM2.23	4+ Digit: Column Subtraction

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

		Nugget Name	Strand	Code
_	PM3.49	Mental Strategies for Division		PM3
	PM3.31	2/3-Digit: Multiplying by 1-Digit		PM1
<b>-</b>	PM3.50	3/4-Digit: Multiplying by 1-Digit		PM3
ivisior	PM3.51	2-Digit: Multiplying by 2-Digits	Facts —	PM3
Multiplication and Division	PM3.52	3/4-Digit: Multiplying by 2-Digits		PM1
ation	PM3.35	2/3-Digit: Dividing Using Partitioning (no Remainders)	ision	PM3
ıltiplic	PM3.36	2/3-Digit: Dividing Using Partitioning (with Remainders)	br Vi	PM3
Σ	PM3.37	2/3-Digit: Dividing Using Written Methods	les ar	
	PM3.53	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (without Remainders)	Times Tables and Division Facts	PM3
	PM3.54	3/4-Digit: Dividing by 1-Digit Numbers Using Short Division (with Remainders)	Ë	PM3
	PM10.05	Multiplying by 2		PM1
	PM3.01	Multiplying by 3		PM3
ω	PM3.02	Multiplying by 4		PM3
ı Fact	PM10.06	Multiplying by 5		PM3
ivision	PM3.17	Multiplying by 6		PM1
and D	PM3.18	Multiplying by 7	W	PM3
Times Tables and Division Facts	PM3.03	Multiplying by 8	Mixed operations	PM3
	PM3.19	Multiplying by 9	d ope	PM1
	PM10.07	Multiplying by 10	Mixe	PM1
	PM3.20	Multiplying by 11		PM3
	PM3.21	Multiplying by 12		PM1

nd	Code	Nugget Name
	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)
	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

Strand	Code	Nugget Name	Strand	Code I	Nugget Name
	PM4.01	Identifying Fractions		PM1.21	2dp: Recognising Place Value in Decimals
	PM4.06	Finding Unit Fractions of Amounts		PM12.02	3dp: Recognising Place Value in Decimals
	PM4.07	Finding Non-Unit Fractions of Amounts		PM4.14	Comparing Decimals
	PM4.08	Finding Fractions of Amounts		PM4.13	Rounding Decimals to the Nearest Whole Number
	PM4.28	Multiplying Fractions by Whole Numbers	ges	PM12.03	Rounding Decimals
	PM4.30	Multiplying Mixed Numbers by Whole Numbers	percentages	PM12.14	Adding and Subtracting Decimals (within 1)
	PM4.31	Fractions as Operators	and per	PM4.41	2dp: Decimal Complements to 1
	PM4.05	Equivalent Fractions 1		PM12.15	3dp: Decimal Complements to 1
ctions	PM4.15	Equivalent Fractions 2	decimals	PM12.04	Adding and Subtracting Decimals
Fract	PM4.03	Comparing and Ordering Fractions	Fractions,	PM4.10	Decimal Equivalents (Tenths/Hundredths)
	PM4.16	Comparing Proper Fractions 1	Frac	PM4.11	Decimal Equivalents (Quarter, Half and Three Quarters)
	PM4.17	Mixed Numbers and Improper Fractions		PM12.05	Introduction to Percentages
	PM4.18	Comparing and Ordering Improper Fractions and Mixed Numbers		PM12.06	Fractions, Decimals and Percentages 1
	PM4.04	Adding and Subtracting Fractions		PM12.07	Finding Percentages 1
	PM4.27	Adding and Subtracting Fractions with Different Denominators		PM12.08	Finding Percentages 2
	PM4.29	Adding and Subtracting Mixed Numbers 1		PM5.01	Units of Measure
	PM4.20	Multiplying Fractions by Whole Numbers Practice	v	PM5.02	Length
	PM4.19	Adding and Subtracting Fractions with Different Denominators Prac-	ements	PM5.10	Measuring Length
s, and ges	PM4.02	Tenths	Measure	PM5.11	Converting mm and cm
ractions, cimals and rcentages	PM4.09	Hundredths	Σ	PM5.12	Converting cm and m
Fra deci pero	PM12.01	Thousandths	-	PM5.13	Converting m and km

Strand	Code	Nugget Name	Strand	Code	Nugget Name
	PM5.14	Converting Length		PM7.06	Telling the Time to the Nearest Minute
	PM5.22	Imperial Units of Length		PM7.08	Telling the Time with Roman Numerals
	PM5.03	Solving Length Problems		PM7.09	12 Hour and 24 Hour Clocks
	PM5.23	Solving Length Problems with Conversion		PM7.10	Estimating Time
	PM5.04	Mass and Weight		PM7.11	Finding the Duration
	PM5.15	Measuring Mass	Time	PM7.12	Start and End Times
	PM5.16	Converting Mass		PM7.13	Converting Weeks, Days, Years and Months
ents	PM5.24	Imperial Units of Mass		PM7.14	Converting Seconds, Minutes and Hours
Measurements	PM5.05	Solving Mass Problems		PM7.15	Converting Units of Time
e ⊠	PM5.25	Solving Mass Problems with Conversion		PM7.16	Calendars
	PM5.06	Volume and Capacity		PM7.17	Time Zones
	PM5.17	Measuring Volume		PM5.08	Perimeter by Counting
	PM5.18	Converting Volume		PM5.09	Calculating the Perimeter
	PM5.26	Imperial Units of Volume and Capacity	e	PM13.01	Calculating the Perimeter 2
	PM5.07	Solving Volume and Capacity Problems	Volume	PM5.20	Area by Counting
	PM5.27	Solving Volume and Capacity Problems with Conversion	er and	PM5.21	Area
	PM5.28	Estimating Volume and Capacity	Perimeter	PM13.02	Area of Rectangles
	PM7.01	Units of Time	Area, Pe	PM13.03	Area of Compound Shapes
Time	PM7.03	Telling the Time in Words	Ā	PM13.04	Estimating Area
Ė	PM7.04	Telling the Time to the Nearest 5 Minutes		PM13.05	Area and Perimeter
	PM7.05	Telling the Time to the Nearest 5 Minutes in Words		PM13.06	Volume of Shapes 1

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Strand	Code	Nugget Name
	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
apes	PM8.02	Describing 3D Shapes
of St	PM8.17	Regular and Irregular Polyhedra
Properties of Shapes	PM14.03	Views of 3D Shapes
Prope	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
	MC2.31	Describing Direction
Position and Direction	PM8.14	Describing Position
and [	PM8.15	Plotting Points
sition	PM8.16	Translation 1
<u>&amp;</u>	PM15.01	Reflection 1
Probability	MF46.01	Probability Scale in Words
Prob	MF46.02	Probability Scale in Numbers
	PM9.17	Venn Diagrams
	PM9.18	Carroll Diagrams
	PM9.02	Tables 1
	PM9.05	Tables 2
Statistics	PM9.06	Two-Way Tables
Stati	PM9.07	Timetables
	PM9.03	Bar Charts 1
	PM9.13	Bar Charts 2
	PM9.04	Line Graphs 1
	PM9.08	Line Graphs 2
Ŋ	MPYP19.03	3 - Problem Solving and Reasoning Assessment
End of Year Assessment	MPYP19.04	3 - Arithmetic Assessment
End of Year Assessments	MPYP19.05	4 - Problem Solving and Reasoning Assessment (1)
	MPYP19.06	4 - Problem Solving and Reasoning Assessment (2)

**Primary Mathematics – Grade 4** 

## **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**

Strand	Code	Nugget Name
	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
S	MPYP0.38	Diagnostic: Mixed Operations
Diagnostics	MPYP0.39	Diagnostic: Fractions
Ö	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 N	lugget Name
	MPYP0.46	Diagnostic: Shapes
ostics	MPYP0.47	Diagnostic: Angles
Diagnostics	MPYP0.48	Diagnostic: Position and Direction
	MPYP0.49	Diagnostic: Statistics
	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
e	PM1.27	Counting Forwards and Backwards in Powers of 10
Number and Place Value	PM1.18	Negative Numbers 1
and Pla	PM1.19	Negative Numbers 2 (Including Addition and Subtraction)
mber	PM1.32	Negative Numbers 3
Z	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)

Roman Numerals (Beyond 1000)

Strand	Code	Nugget Name
	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)
tion	PM2.23	4+ Digit: Column Subtraction
Addition and Subtraction	PM2.24	Mental Strategies for Addition 1
and St	PM2.25	Mental Strategies for Addition 2
ition	PM2.26	Mental Strategies for Subtraction 1
Ado	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
acts	PM10.05	Multiplying by 2
sion F	PM3.01	Multiplying by 3
d Divis	PM3.02	Multiplying by 4
Times Tables and Division Facts	PM10.06	Multiplying by 5
es Tab	PM3.17	Multiplying by 6
Time	PM3.18	Multiplying by 7

PM1.30

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)
Times Tables and Division Facts	PM10.08	Dividing by 2
ision	PM3.05	Dividing by 3
d Div	PM3.06	Dividing by 4
les an	PM10.09	Dividing by 5
s Tab	PM3.23	Dividing by 6
H H H	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
rtion	PM3.40	Common Factors
Multiplication and Division	PM3.41	Prime Numbers
Mult	PM3.42	Prime Factors
	PM3.55	Common Multiples

Strand	Code N	lugget 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
io L	PM3.49	Mental Strategies for Division
Divis	PM3.31	2/3-Digit: Multiplying by 1-Digit
n and	PM3.50	3/4-Digit: Multiplying by 1-Digit
Multiplication and Division	PM3.51	2-Digit: Multiplying by 2-Digits
ıltipli	PM3.52	3/4-Digit: Multiplying by 2-Digits
ž	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

Strand	Code	Nugget Name
	PM11.01	Understanding the Equals Sign
	PM3.33	Correspondence Problems 1
	PM3.34	Correspondence Problems 2
Suc	PM11.02	Solving Multistep Problems 1 (with Multiplication)
Mixed Operations	PM11.03	Solving Multistep Problems 2 (with Division)
ed Op	PM3.32	Scaling Problems 2
Ê	PM11.04	Multistep Scaling Problems
	PM11.05	Operations of Equal Priority
	PM11.06	BIDMAS: 4 Operations and Brackets
	PM11.07	BIDMAS: Indices
	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
Fractions	PM4.31	Fractions as Operators
Fract	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 N	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
ecimal	PM12.09	Multiplying Decimals
ns, De	PM12.10	Dividing Decimals
ractio	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
	PM12.05	Introduction to Percentages
Seb	PM12.07	Finding Percentages 1
Percentages	PM12.08	Finding Percentages 2
Per	PM16.01	Finding Percentages of Amounts 1
	PM16.02	Finding Percentages of Amounts 2

Strand	Code	Nugget Name
s e	PM16.03	Finding Percentages of Amounts 3
Percentages	PM16.04	Finding Percentages of Amounts 4
	PM16.05	Percentages (Missing Values)
	PM17.01	Introduction to Ratio
it.	PM17.02	Simplifying Ratios
Ratio and Proportion	PM17.03	Ratios and Fractions
	PM17.04	Sharing into a Given Ratio
Rati	PM17.05	Similar Shapes
	PM17.06	Proportion
	PM18.01	Sequences
	PM18.02	Function Machines
	PM18.03	Forming Expressions 1
	PM18.04	Forming Expressions 2
œ .	PM18.05	Forming Expressions 3
Algebra	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
	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
ents	PM5.06	Volume and Capacity
Measurements	PM5.17	Measuring Volume
Mea	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
vy .	PM5.22	Imperial Units of Length
Measurements	PM5.24	Imperial Units of Mass
Measur	PM5.26	Imperial Units of Volume and Capacity
	PM5.30	Converting Miles and Kilometres
	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
Ti Be	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
	PM5.08	Perimeter by Counting
	PM5.09	Calculating the Perimeter
	PM13.01	Calculating the Perimeter 2
	PM5.20	Area by Counting
a T	PM5.21	Area
d Volt	PM13.02	Area of Rectangles
er and	PM13.05	Area and Perimeter
rimet	PM13.03	Area of Compound Shapes
Area, Perimeter and Volume	PM13.04	Estimating Area
, Å	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
	PM8.01	Describing 2D Shapes
	PM8.11	Triangles
sec	PM8.12	Quadrilaterals
f Sha	PM14.13	Circles
ties o	PM14.01	Regular and Irregular Polygons
Properties of Shapes	PM14.02	Lengths of Right-Angled Shapes
<u>ā</u>	PM8.06	Identifying Lines
	PM8.07	Lines of Symmetry
	PM8.13	Sorting Shapes

Code N	Nugget Name
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
	MF29.01 MF29.06 PM8.02 PM8.17 PM14.03 PM8.03 PM14.14 PM8.04 PM14.04 PM14.05 PM14.05 PM14.07 PM14.08 PM14.09 PM14.10 PM14.11 PM14.12 PM14.15 PM14.15

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

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

## **Course Content Mathematics - MYP**

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
	MF0.02	Diagnostic: Algebra 1
	MF0.03	Diagnostic: Geometry 1
tics	MF0.04	Diagnostic: Number 2
ignos'	MF0.05	Diagnostic: Probability 1
Topic Diagnostics	MF0.06	Diagnostic: Statistics 1
	MF0.07	Diagnostic: Algebra 2
	MF0.08	Diagnostic: Geometry 2
	MH0.09	Diagnostic: Number 3

	Strand	Code	Nugget Name	Stra	and	Cod
		MH0.10	Diagnostic: Number 4			MF2.
		MH0.11	Diagnostic: Algebra 3			MF2.
		MH0.12	Diagnostic: Algebra 4			MH2
	Topic Diagnostics	MH0.13	Diagnostic: Algebra 5		Integers	MF2.
	Diagn	MH0.14	Diagnostic: Geometry 3			MF2.
	opic	MH0.15	Diagnostic: Geometry - Circles and Circle Theorems	<u>.</u>		MF2
		MH0.16	Diagnostic: Statistics 2			MF2
		MH0.17	Diagnostic: Probability 2		_	MF2
		MH0.18	Diagnostic: Geometry - Advanced Trigonometry			MF2
		MF37.01	Reading a 12-Hour Clock 1: O'Clock and Half Past			MF3
		MF37.02	Reading a 12-Hour Clock 2: Multiples of 5			MF3.
		MF37.03	Reading a 12-Hour Clock 3: Mixed			MF3.
		MF37.04	Converting Time: AM and PM			MF3.
	Time	MF37.05	Converting Time: Seconds, Minutes and Hours	·	<u>n</u>	MF3.
		MF37.06	Converting Time: Days, Weeks and Years			MF3.
		MF37.07	Calendar Months			MF3.
		MF37.08	MF37.08 Converting Time: Mixed Units		Number Operations	MF3.
		MF37.09	Problems with Time	2	Ž	MF3.
		MF2.01	Integer Place Value			MF3
	Jers	MF2.02	Mathematical Symbols			MF3
	Integers	MH2.03	Negative Numbers			MF3
		MF2.04	Symmetrical Subtraction			MF3

Strand	Code	Nugget Name
	MF2.05	Adding Negatives
	MF2.06	Subtracting Negatives
	MH2.07	Negatives and Positives
vy .	MF2.08	Ordering Integers
Integers	MF2.09	Ordering Decimals
Ξ.	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
	MF3.02	Column Subtraction
	MF3.03	Addition and Subtraction: Worded Questions
	MF3.04	Multiplying Negatives
<u>s</u>	MF3.05	Dividing Negatives
ration	MF3.06	Multiplying and Dividing with Negatives
r Ope	MF3.07	Column Multiplication
Number Operations	MF3.08	Grid Multiplication
Z	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
<u>~</u>	MF3.14	BIDMAS Introduction
ration	MF3.15	BIDMAS Intermediate
r Ope	MF3.16	BIDMAS Advanced
Number Operations	MF3.17	Using a Calculator 1: Powers and Roots of a Single Number
z	MF3.18	Using a Calculator 2: Multiple Numbers
	MF12.01	Squares
oots	MF12.02	Cubes
are Ro	MF12.03	Squaring and Cubing Negatives
Squares & Square Roots	MF12.04	Powers
ares	MF12.05	Roots of Squares and Cubes
Squ	MF12.06	Roots
	MH12.07	Estimating Powers and Roots
	MF4.01	Expressing Fractions
	MF4.02	Ordering Fractions
	MF4.03	Equivalent Fractions
	MF4.04	Simplifying Fractions
Fractions	MF4.05	Shading Fractions
Frac	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
	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
Fractions	MF4.21	Adding and Subtracting Improper Fractions and Mixed Numbers
Frac	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
દ	MF4.33	Reverse Fractions: Worded Questions
Fractions	MF4.34	Estimating Products of Fractions
Œ	MF4.35	Dividing Fractions (Bar Model)
	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
Decimals	MF6.07	Multiplying Decimals 2
Dec	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
	MF7.07	Finding Multiples of Tens in Percentages
se g	MF7.09	Finding Percentages of Amounts 2
Percentages	MF7.14	Estimate with Percentages
Per	MF7.03	Finding 25%
	MF7.08	Finding Percentages of Amounts 1

Strand	Code	Nugget Name
	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%
v	MF7.05	Finding 5%
Percentages	MF10.02	Percentage Decrease
Percel	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

Strand	Code	Nugget Name
	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
ges	MF11.19	Reverse Percentages: Modelling
Percentages	MF11.01	Finding Percentages 1: Integer Percentages < 100% (Calculator)
Per	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
	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
FDP	MF8.08	Percentage to Fractions
E	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
	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)
<del>D</del>	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)
	MF5.01	Odds and Evens with Addition and Subtraction
	MF5.02	Odds and Evens with Multiplication
	MF5.03	Primes
les	MF5.04	Multiples
& Prin	MF5.05	Factors
ples	MF5.06	Multiples and Factors
Multi	MF5.07	Lowest Common Multiple - Listing Technique
Factors, Multiples & Primes	MF5.08	Highest Common Factor - Listing Technique
Ф	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

Strand	Code	Nugget Name
es	MF5.13	HCF Using Prime Factorisation: Product of Prime Factors
Multip mes	MF5.14	LCM Using Prime Factorisation: Venn Diagrams
Factors, Multiples & Primes	MF5.15	LCM Using Prime Factorisation: Product of Prime Factors
Fac	MF5.16	HCF and LCM with Prime Factorisation
	MF22.01	Continuing Sequences
	MF22.02	Linear Sequences: Finding the Term-to-Term Rule
	MF22.03	Linear Sequences: Using the Term-to-Term Rule
seou	MF22.04	Linear Sequences with Diagrams 1: Term-to-Term Rule
Number Sequences	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
lber S	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
Nun	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
S	MF25.01	Representing Inequalities on a Number Line
nes & ualitie	MF25.02	Representing Two Sided Inequalities on a Number Line
Number Lines & imple Inequalitie	MF25.03	Interpreting Inequalities from a Number Line
Number Lines & Simple Inequalities	MF25.04	Interpreting Two Sided Inequalities from a Number Line
S S	MF25.05	Finding Integer Solutions to Inequalities
	MF15.01	Introduction to Ratio
Ratios	MF15.02	Simplifying Ratios
_	MF15.03	Converting Ratios into the Form 1:n

Strand	Code	Nugget Name
	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)
Ratios	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
	MH51.01	Fractions to Recurring Decimals 1: Special Cases
	MH51.02	Fractions to Recurring Decimals 2: Long Division
nals	MH51.03	Fractions to Recurring Decimals 3: Long Division (Numbers > 1)
Decir	MH51.04	Recurring Decimals 1: 1–2 Digits
Recurring Decimals	MH51.05	Recurring Decimals 2: 2–4 Digits
Reci	MH51.06	Recurring Decimals 3: Non-Recurring and Recurring Digits
	MH51.07	Recurring Decimals 4: Special Cases
	MH51.08	Recurring Decimals 5: Calculations
- str	MF13.01	Powers of 0 and 1
Exponents	MF13.02	Raising a Fraction to a Power
ă	MF13.03	Multiplying Indices

Strand	Code	Nugget Name
	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
ıts	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions
Exponents	MH13.12	Fractional Indices 5: Fraction Base
ŭ	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
	MH25.13	Solving Quadratic Inequalities Graphically
ies	MF25.06	Solving Inequalities: One Step
Inequalities	MF25.07	Solving Inequalities: Negative Variable
<u>n</u>	MF25.08	Solving Inequalities: Two Step
	MF25.09	Solving Inequalities: One Step and Two Sided

Strand	Code	Nugget Name
	MF25.10	Solving Inequalities: Multi Step and Two Sided
	MF25.11	Solving Inequalities: Finding Integer Solutions with Two Sides
.es	MF25.12	Solving Inequalities: Expressing Solutions on a Number Line
Inequalities	MH25.14	Solving Inequalities: Quadratics 1
<u>n</u>	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)
	MH25.16	Solving Inequalities: Quadratics 3 (Factorising)
	MH25.17	Solving Multiple Linear Inequalities
	MF14.01	The Positive Powers of 10
	MF14.02	The Negative Powers of 10
	MF14.03	Standard Form to Ordinary
Ε	MF14.04	Ordinary to Standard Form
Standard Form	MF14.05	Fixing into Standard Form
andar	MF14.06	Ordering Standard Form
ស	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
	MF16.01	Introduction to Proportion
verse on	MF16.02	Recipe Ratio 1: Find Amount of Ingredients
Direct & Inverse Proportion	MF16.03	Recipe Ratio 2: Find the Number of People
Direc Pro	MF16.04	Better Value
	MF16.05	Direct Proportion 1: Conversions

Strand	Code	Nugget Name
	MF16.06	Direct Proportion 2: y = kx
	MF16.07	Inverse Proportion 1: Introduction
	MF16.08	Inverse Proportion 2: y = k/x
rtion	MF16.09	Proportions on a Graph
Propo	MF16.10	Ratio and Rate Problems 1: Testing for Equivalence
Direct & Inverse Proportion	MH16.10	Direct Proportion 3: $y = kx^a$ and $y = k\sqrt{x}$
t & In	MH16.11	Inverse Proportion 3: $y = k/x^a$ and $y = k/\sqrt{x}$
Direc	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
	MF9.13	Bounds 1: Introduction
	MF9.14	Bounds 2: Simple Calculation
	MF9.15	Bounds 3: Intervals
	MH9.16	Bounds 4: Addition
Ø	MH9.17	Bounds 5: Subtraction
Bounds	MH9.18	Bounds 6: Multiplication
ш	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
	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)
Sp	MH52.05	Surds: Simplifying 3 (Dividing Surds)
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)
	MF17.01	Forming Algebraic Expressions: One Step
	MF17.02	Forming Algebraic Expressions: Two Step
	MF17.03	Algebraic Terminology
Su	MF17.04	Collecting Like Terms 1: Add and Subtract
Algebraic Expressions	MF17.05	Collecting Like Terms 2: Add and Subtract (Including Squared/Cubed Variables)
aic Ex	MF17.06	Collecting Like Terms 3: In Context (Perimeter)
gebra	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

Strand	Code	Nugget Name
Substitution Into Expressions	MF17.13	Substitution into Expressions 1: One Term
	MF17.14	Substitution into Expressions 2: Two Terms
bstitu Expre	MF17.15	Substitution into Expressions 3: Two Terms incl. Squares
Su_	MF17.16	Substitution into Expressions 4: Calculator
	MF19.18	Generating Equations from Words
	MF19.19	Generating Equations from Diagrams
	MF19.01	Solving Equations: One Step (+ –)
<u>v</u>	MF19.02	Solving Equations: One Step (×)
Forming & Solving Simple Equations	MF19.03	Solving Equations: One Step (÷)
e Eq	MF19.04	Solving Equations: One Step $(+ - \times \div)$
Simp	MF19.05	Solving Equations: Two Steps (× ÷)
olving	MF19.06	Solving Equations: Two Steps ax + b = c
8 8 8	MF19.07	Solving Equations: Two Steps $ax - b = c$
ormin	MF19.08	Solving Equations: Two Steps (x/a) $\pm$ b = c
ш	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)
	MF18.25	Expanding Single Brackets: Introduction
Expanding & Factorising	MF18.01	Expanding Single Brackets 1: $a(x \pm b)$
Expanding & Factorising	MF18.02	Expanding Single Brackets 2: $\pm a(x \pm b)$
	MF18.03	Expanding Single Brackets 3: ±a(±bx ± cy)

Strand	Code	Nugget Name
-	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: $x \pm a$ 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: $(x \pm a)(x \pm b)$
sing	MF18.11	Expanding Double Brackets 2: (ax $\pm$ b)(cx $\pm$ d)
Expanding & Factorising	MF18.12	Expanding Double Brackets 3: $(x \pm a)^2$
<u>ന്</u> ജ	MF18.13	Expanding Double Brackets 4: a(bx $\pm$ c)(dx $\pm$ e)
andin	MF18.14	Expanding Double Brackets 5: $a(bx \pm c)^2$
Expa	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: $(ax \pm b)(cx \pm d)$
<u>а</u>	MF21.01	Generating Formulae
Using Formulae	MF21.02	Substituting into a Formula
	MF21.04	Recalling and Using Formulae 1
	MH21.11	Recalling and Using Formulae 2

Strand	Code	Nugget Name
Rearranging Formulae	MF21.05	Rearranging Formulae: One Step
	MF21.06	Rearranging Formulae: Two Step
	MF21.07	Rearranging Formulae: Negative Subject
rangin	MF21.08	Rearranging Formulae: Unknown in Denominator
Reari	MF21.09	Rearranging Formulae: With Powers
	MF21.10	Rearranging Formulae: Unknown on Both Sides
	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
tics	MH20.06	Quadratic Formula 1: Identify A, B and C
Solving Quadratics	MH20.07	Quadratic Formula 2: Applying the Formula
ving Q	MH20.08	Quadratic Formula 3: Applying the Formula
So	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
	MF22.11	Important Sequences: Geometric
	MF22.12	Important Sequences: Fibonacci
S	MF22.13	Quadratic Sequences: Using the nth Term
Arithmetic & Geometric Sequences	MH22.14	Subscript Notation
ric Se	MH22.15	Unusual Sequences
eomet	MH22.16	Quadratic Sequences 1: n <sup>2</sup> + c
ic & G	MH22.17	Quadratic Sequences 2: an <sup>2</sup> + c
ithme	MH22.18	Quadratic Sequences 3: an <sup>2</sup> + bn + c
Ar	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
	MH13.21	Exponential Equations 1: Introduction
Exponential Equations	MH13.22	Exponential Equations 2: Quadratics (Changing One Base)
Exponentia Equations	MH13.23	Exponential Equations 3: Quadratics (Changing Multiple Bases)
	MH13.24	Exponential Equations 4: Challenge
	MH52.12	Surds: Rationalising 1 (Monomial Denominator)
Rationalising the Denominator	MH52.13	Surds: Rationalising 2 (Binomial Denominator)
	MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)
Ratio	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
<b>"</b>	MF23.11	Graphing y = mx + c (1)
	MF23.12	Graphing y = mx + c (2)
	MH19.27	Iteration 1: Find Solution Between
Iteration	MH19.28	Iteration 2: Rearrange Iterative Formula
=	MH19.29	Iteration 3: Recursive Iteration
	MF19.20	Simultaneous Equations: Introduction
ons	MF19.21	Simultaneous Equations 1
Equati	MF19.22	Simultaneous Equations 2: Scale One Equation
Simultaneous Equations	MF19.23	Simultaneous Equations 3: Scale Both Equations
ultane	MF19.24	Simultaneous Equations 4: Rearranging
Sin	MF19.25	Simultaneous Equations: Substitution
	MF19.26	Simultaneous Equations: Worded Questions
	MH24.24	Transforming Graphs: Translating Vertical
hs	MH24.25	Transforming Graphs: Translating Horizontal
Grap	MH24.26	Transforming Graphs: Reflections
Transforming Graphs	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
Tar	MH24.33	Transforming Graphs: Combined 2
	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)
10	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)
actions	MH54.06	Algebraic Fractions 6: Add and Subtract (Monomial as Denominator)
aic Fra	MH54.07	Algebraic Fractions 7: Add and Subtract (Binomial as Denominator)
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
U	MH24.18	Trigonometric Functions: Sin Graph
rigonometric Functions	MH24.19	Trigonometric Functions: Cos Graph
rigonometı Functions	MH24.20	Trigonometric Functions: Tan Graph
-	MH24.21	Trigonometric Functions: Mixed (Trig Functions)

Strand	Code	Nugget Name
Su	MF24.07	Plotting Other Polynomial Graphs
Representations of Functions	MF24.08	Plotting Reciprocal Graphs
presel	MH24.23	Plotting Exponential Graphs
	MF24.09	Recognising Key Graphs
	MH56.01	Functions: Key Concept
	MH56.02	Functions: Substitution 1 (Linear Functions)
Functions	MH56.03	Functions: Substitution 2 (Quadratic Functions)
Funo	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)
v	MH56.09	Composite Functions: Substitution 3 (3 Functions)
nction	MH56.10	Composite Functions: Substitution 4 (Quadratic Functions)
se Fur	MH56.11	Composite Functions: Solving
Inver	MH56.12	Composite Functions: Algebraic
Composite & Inverse Functions	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
	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
ngles	MF26.08	Types of Triangles 2: Words
ss & A	MF26.09	Types of Quadrilateral
Classifying Shapes & Angles	MF26.10	Naming 3D Shapes
fying	MF26.11	Measuring Angles 1: Angles < 180° (horizontal)
Classi	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
e g	MF27.01	Straight Line Angles 1: Multiples of 5°
Calculations With Angle Properties	MF27.02	Straight Line Angles 2
	MF27.03	Straight Line Angles with Algebra
	MF27.04	Angles Around a Point 1: Multiples of 5°
Caic	MF27.05	Angles Around a Point 2

Strand	Code	Nugget Name
	MF27.06	Angles Around a Point with Algebra
	MF27.07	Vertically Opposite Angles
	MF28.01	Angles in a Triangle 1
<u>es</u>	MF28.02	Angles in a Triangle 2: Isosceles Triangles
Calculations With Angle Properties	MF28.03	Angles in a Triangle 3: Including Angles on a Straight Line
gle P	MF28.04	Angles in a Triangle 4: Including Angles in Parallel Lines
/ith Ar	MF28.05	Angles in Quadrilaterals
ons W	MF28.06	Introduction to Angles in Polygons
Iculati	MF28.07	Interior Angles 1: Sum of Interior Angles
ပဳ	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
	MF27.08	Alternate Angles
nes	MF27.09	Corresponding Angles
llar Li	MF27.10	Co-interior Angles
Parallel & Perpendicular Lines	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
& clar	MH23.23	Finding Perpendicular Lines 3: Problem Solving
Parallel & Perpendiculai Lines	MH23.24	Equation of a Tangent 1: Circle Given
Perp	MH23.25	Equation of a Tangent 2: Mixed Exercise
	MF30.01	Perimeter by Counting
	MF30.02	Perimeter of Regular Shapes 1: Calculate Perimeter
Perimeter	MF30.03	Perimeter of Regular Shapes 2: Calculate Side Length
Perin	MF30.04	Perimeter of Composite Shapes 1
	MF30.05	Perimeter of Composite Shapes 2: Worded Context
	MF30.06	Perimeter and Algebra
	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
Area	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
∞ 0 0	MF32.01	Circumference: From Radius
Circles: Perimeter, Area & Circumference	MF32.02	Circumference: From Diameter
Circ imete ircumi	MF32.03	Circumference
Peri	MF32.04	Using the Circumference to find the Radius or Diameter

Strand	Code	Nugget Name		
	MF32.05	Perimeter of Part Circles		
ence	MF32.06	Perimeter of Composite Shapes with Part Circles		
umfer	MF32.07	Area of a Circle: From Radius		
Circles: ea & Circ	MF32.08	Area of a Circle: From Diameter		
Circles: Perimeter, Area & Circumference	MF32.09	Area of a Circle		
neter,	MF32.10	Using the Area of a Circle to find the Radius or Diameter		
Perir	MF32.11	Areas of Part Circles		
	MF32.12	Areas of Composite Shapes with Part Circles		
	MF33.02	Nets of Cubes		
	MF35.01	Surface Area of Cuboids		
	MF35.02	Surface Area of Prisms		
Nets	MF35.03	Surface Area of Cylinders		
Surface Area & Nets	MF35.04	Surface Area of Part Cylinders		
ace A	MF35.05	Surface Area of Spheres		
Surf	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		
Ites	MF23.01	Understanding Coordinates: 1st Quadrant		
Coordinates	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
Symn	MF40.02	Finding the Line of Reflection
	MF40.03	Coordinates in Reflection
	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
W	MF36.07	Converting Metric Mass (One Step)
ersion	MF36.08	Converting Metric Mass (Multi-Step)
Conve	MF36.09	Converting Metric Mass: Worded Questions
Metric Conversions	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			
nence	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		
Cong	MF43.04	Similar Polygons: Missing Sides		
Similarity & Congruence	MF43.05	Similar Triangles 1: Same Orientation		
	MF43.06	Similar Triangles 2: Different Orientations		
vi	MH43.07	Similar Area 1		
	MH43.08	Similar Area 2: Including Ratio		
	MH43.09	Similar Volume		
	MH43.10	Similar Area and Volume		
	MF23.03	Midpoint of a Line Segment		
ŧτ	MH23.20	Coordinates and Ratios		
еоше	MF23.08	Finding the Gradient of a Line Segment: Using the Graph		
Coordinate Geometry	MF23.09	Finding the Gradient of a Line Segment: Using the Formula		
ordin	MF23.13	Finding y = mx + c from a Gradient and a Point		
ပိ	MF23.14	Finding y = mx + c from Two Points		
	MF23.15	Rearranging y = mx + c		
ic	MF40.04	Translating a Point		
Isometric Transformations	MF40.05	Translating a Shape		
	MF40.06	Describing Translations		

Strand	Code	Nugget Name			
-	MF40.07	Enlarging Shapes			
	MF40.08	Enlargements with 0 <sf<1< td=""></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			
<u>s</u>	MF40.18	Describing Transformations			
Isometric Transformations	MF40.19	Combination of Transformations 1			
ısforn	MH40.24	Combination of Transformations 2			
ic Trai	MF40.10	Enlargement with Centre (x,y)			
ometr	MF40.11	Enlargement with Fractional Scale Factor (0,0)			
<u>8</u>	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		
Ž	MH57.05	Angles on the Same Arc		
	MH57.06	Angles at the Centre and on the Same Arc		
	MH57.07	Cyclic Quadrilaterals		
Circle Geometry	MH57.08	Alternate Segment Theorem		
G e G	MH57.09	Mixed Circle Theorems 1: Practice		
ö	MH57.10	Mixed Circle Theorems 2: Algebra		
	MH57.11	Mixed Circle Theorems 3: Two Theorems		
	MH57.12	Mixed Circle Theorems 4: Challenge		
	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		
city	MF34.08	Volume of Cylinders with a Missing Value		
Volume & Capacity	MF34.09	Volume of Part Cylinders		
ıme &	MF34.10	Volume of a Sphere		
Volu	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		
ne &	MH34.17	Problem Solving with Volume		
Volume & Capacity	MH34.18	Volume of Frustums		
	MF39.06	Introduction to Bearings		
Bearings	MF39.07	Bearings from North		
Bear	MF39.08	Finding Bearings 1		
	MF39.09	Finding Bearings 2: Using Co-interior Angles		
	MF44.01	Pythagoras' Theorem		
	MF44.02	Pythagoras: Finding the Hypotenuse		
Ε	MF44.03	Pythagoras: Finding a Short Side		
Pythagoras' Theorem	MF44.04	Pythagoras: Mixed Sides		
ras' T	MF44.05	Pythagoras: Using Coordinates		
rthago	MF44.06	Pythagoras: Worded Questions		
₫	MF44.07	Pythagoras: Applied Questions		
	MH59.01	3D Pythagoras 1: Cuboids		
	MH59.02	3D Pythagoras 2: Pyramids and Cylinders		
	MF45.01	Introduction to SOHCAHTOA		
ios in ngles	MF45.02	Trigonometry: Using a Calculator		
Trigonometric Ratios in Right-Angled Triangles	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	e Nugget Name		
Trigonometric Ratios in Right-Angled Triangles	MF45.07	Exact Trigonometric Values		
	MF45.08	Trigonometry and Pythagoras		
	MH59.03	3D SOH CAH TOA		
yonon Jht-An	MH59.04	3D Trigonometry		
Tric	MH59.05	3D Trigonometry: Problem Solving		
	MH58.05	Sine Rule: Proof		
	MH58.06	Sine Rule: Sides		
	MH58.07	Sine Rule: Angles		
	MH58.08	Sine Rule: Applied		
<b>u</b>	MH58.09	Cosine Rule: Proof		
Sine Rule & Cosine Rule	MH58.10	Cosine Rule: Finding a		
Cosir	MH58.11	Cosine Rule: Finding A		
gule &	MH58.12	Cosine Rule: Applied		
Sine R	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		
gth	MF32.13	Arc Length 1: Fractions		
Arc Length & Sector	MF32.14	Arc Length 2: Degrees		
Ā	MH32.17	Arc Length 3: Reverse		

Strand	Code	Nugget Name		
Arc Length & Sector	MF32.15	Area of a Sector 1		
Arc Lo	MH32.18	Area of a Sector 2: Reverse		
	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		
w ·	MF41.06	Geometric Vectors 2: Two Terms		
Vectors	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		

Strand	Code	Nugget Name	Stra	nd Coo	le	Nugget Name
	MF48.01	Hypotheses, Primary Data and Secondary Data		MF49	0.06	Mean 4: Changing Means
	MF48.02	Tally Chart Questionnaires		MF49	9.07	Range 1: Positive Integers
	MF48.03			MF49	80.0	Range 2: Decimals and Negatives
	MF48.04			MF49	0.09	Applying Averages and the Range 1: Raw Data
	MF48.07			MF4	9.10	Mode from Frequency Table
	MF50.03	Pictograms	ŕ	MF4	9.11	Median from Frequency Table
tions	MF50.04	Bar Charts	Median,	MF4	9.12	Mean from Frequency Table
Graphical Representations	MF50.05	Multiple and Composite Bar Charts		MF4	9.13	Range from Frequency Table
Repre	MF50.06	Vertical Line Graphs		MF4	9.14	Modal Class from Grouped Frequency Table
hical	MF50.07	Creating Stem and Leaf Diagrams		MF4	9.15	Median from Grouped Frequency Table
Grap	MF50.08	Interpreting Stem and Leaf Diagrams  Creating Pie Charts (No Calculator)		MF4	9.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
	MF50.09			MF4	9.17	Mean from Grouped Frequency Table 2: Continuous Data
	MF50.10	Creating Pie Charts (Calculator)		MF4	9.18	Range from Grouped Frequency Table
	MF50.11	Interpreting Pie Charts		MF4	9.19	Applying Averages and the Range 2: Tables
	MF50.01	Completing Two Way Tables		MF4	5.01	Probability Scale in Words
	MF50.02	Interpreting Two Way Tables		MF46	5.02	Probability Scale in Numbers
	MF50.12	Time Series Graphs		MF46.0	5.03	Calculating Probability
	MF49.01	Mode	Probability	MF46	5.05	Two Way Tables: Probability
, Median, & Range	MF49.02	Median	Prob	MF46	5.06	Listing Outcomes
ı, Mec e & Ra	MF49.03	Mean 1: Positive Integers		MH4	6.18	Product Rule for Counting
Mean, Mode	MF49.04	Mean 2: Decimals and Negatives		MF46	5.07	Sample Spaces
	MF49.05	Mean 3: Finding Missing Values		MF46	5.09	Expected Frequency

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)		
oling	MF48.05	Types of Random Sampling		
Sampling Techniques	MF48.06	Fair Samples		
syd	MF50.13	Drawing Scatter Graphs		
Scatter Graphs	MF50.14	Interpreting Scatter Graphs 1: Introduction		
Scat	MF50.15	Interpreting Scatter Graphs 2: Outliers		
	MH60.01	Cumulative Frequency 1: Calculating		
	MH60.02	Cumulative Frequency 2: Drawing		
ots	MH60.03	Cumulative Frequency 3: Calculating Frequency		
30x P	MH60.04	Cumulative Frequency 4: Finding Values		
cy & F	MH60.05	Cumulative Frequency 5: Median		
adneu	MH60.06	Cumulative Frequency 6: Quartiles		
Cumulative Frequency & Box Plots	MH60.07	Cumulative Frequency 7: Interquartile Range		
nulati	MH60.08	Cumulative Frequency 8: Plot and Evaluate		
Cur	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		
	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		
SE	MF47.06	Constructing Venn Diagrams 1: Listing Elements		
iagra	MF47.07	Constructing Venn Diagrams 2: Writing Values		
Sets & Venn Diagrams	MH47.12	Constructing Venn Diagrams 3: 3-Set Diagrams		
ts & V	MF47.09	Interpreting Venn Diagrams 1: 2-Set Diagrams		
<b>%</b>	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)		

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)			
	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)			
ams	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)			
Tree Diagrams	MH46.22	Tree Diagrams 7: NOT Statements			
Tree	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
	MH61.06	Histograms 4: Calculating Frequency within a Given Range
suc	MH61.07	Histograms 5: Mixed Exercise (Consolidates 1-4)
Polyge	MH61.08	Histograms 6: Finding Fractions and Percentages
Histograms & Frequency Polygons	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)

# 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.

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
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## **Nuggets**

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

Strands	Code	Nugget Name
	BR0.01	Diagnostic 1: Essentials
	BR0.02	Diagnostic 2: Essentials
	BR0.03	Diagnostic 3
	BR0.04	Diagnostic 4
Diagnostics	BR0.05	Diagnostic 5: Physics for Mechanics
Diagn	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
	MF11.07	Compound Interest (Calculator)
ulator	MF11.08	Depreciation (Calculator)
Percentages Calculator	MF11.09	Compound Interest and Depreciation (Calculator)
	MH11.14	Exponential Growth
	MH11.15	Exponential Decay
	MH11.16	Exponential Growth and Decay

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  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)  MH52.09 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 3 (Sum/Difference with Binomial Denominators)  MH52.15 Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)	Strands	Code	Nugget Name
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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)		MH52.02	Surds: Multiplication and Division
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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)		MH52.10	Surds: Expanding 4 (Double Brackets, Surds with Coefficients)
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MH52.14 Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)  MH52.15 Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)		MH52.12	Surds: Rationalising 1 (Monomial Denominator)
MH52.15 Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)		MH52.13	Surds: Rationalising 2 (Binomial Denominator)
		MH52.14	Surds: Rationalising 3 (Sum/Difference with Binomial Denominators)
MH52.16 Surds: Rationalising 5 (Surd within Fraction within Denominator)		MH52.15	Surds: Rationalising 4 (Sum/Difference with Binomial Denominators)
		MH52.16	Surds: Rationalising 5 (Surd within Fraction within Denominator)

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Strands	Code	Nugget Name
	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
v	MH13.11	Fractional Indices 4: Negative Non-Unit Fractions
Indices	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
	MF17.07	Simplifying Expressions 1: Multiplication
bra	MF17.08	Simplifying Expressions 2: Multiplication (In Context)
Alge	MF17.09	Simplifying Expressions 3: Division
ion to	MF17.10	Simplifying Expressions 4: Division
Introduction to Algebra	MF17.11	Simplifying Expressions 5: Multiplication and Division
重	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: $(ax \pm b)(cx \pm d)$
	MF18.12	Expanding Double Brackets 3: $(x \pm a)^2$
-	MF18.13	Expanding Double Brackets 4: $a(bx \pm c)(dx \pm e)$
Expanding and Factorising	MF18.14	Expanding Double Brackets 5: $a(bx \pm c)^2$
Facto	MH18.18	Expanding Double Brackets 6: $(ax \pm b)(cy \pm d)$
and	MH18.19	Expanding More Brackets
ding	MF18.15	Factorising Quadratics 1: $(x + a)(x + b)$
Expar	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

Strands	Code	Nugget Name
	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)
<u>v</u>	MF19.17	Solving Equations: Four Steps (Including Fractions)
Jation	MF19.20	Simultaneous Equations: Introduction
ar Eq.	MF19.21	Simultaneous Equations 1
Line	MF19.22	Simultaneous Equations 2: Scale One Equation
Solving Linear Equations	MF19.23	Simultaneous Equations 3: Scale Both Equations
v)	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
	MF20.01	Solving Quadratics 1: $x^2 + b = 0$
suc	MF20.02	Solving Quadratics 2: $ax^2 + bx = 0$
quatic	MF20.03	Solving Quadratics 3: $x^2 + bx + c = 0$
atic E	MF20.04	Solving Quadratics 4: $x^2 + bx + c = 0$ (incl. Rearranging)
Solving Quadratic Equations	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
suc	MH20.09	Quadratic Formula 4: Give Answer in Form (p $\pm \sqrt{q}$ )/r
Solving Quadratic Equations	MH20.10	Quadratic Formula 5: In Context
atic Ē	MH20.11	Solving Quadratics 5: $ax^2 + bx + c = 0$ (a is Prime)
Juadr	MH20.12	Solving Quadratics 6: $ax^2 + bx + c = 0$ (a is Not Prime)
ving (	MH20.13	Solving Quadratics 7: Challenge
<u>8</u> 0	MH20.14	Quadratic Simultaneous Equations
	MH53.01	Completing the Square 1: $(x + q)^2 + r$
	MH53.02	Completing the Square 2: $(x + q/2)^2 + r$
e e	MH53.03	Completing the Square 3: $p(x + q)^2 + r$
Squa	MH53.04	Completing the Square 4: $-p(x + q/2)^2 + r$
ng the	MH53.05	Completing the Square to Solve Equations 1: $x^2 + bx + c$
Completing the Square	MH53.06	Completing the Square to Solve Equations 2: $x^2 + bx + c$ (Including Fractions)
ပိ	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
	MH54.01	Algebraic Fractions 1: Simplify (Monomial Factors)
<u>v</u>	MH54.02	Algebraic Fractions 2: Simplify (Monomial Factors incl. Negatives)
Algebraic Fractions	MH54.03	Algebraic Fractions 3: Simplify (Binomial Factors)
ie Fr	MH54.04	Algebraic Fractions 4: Simplify (Binomial Factors)
lgebra	MH54.05	Algebraic Fractions 5: Add and Subtract (Constant as Denominator)
<b>∀</b>	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
	MH54.08	Algebraic Fractions 8: Multiply
ions	MH54.09	Algebraic Fractions 9: Multiply
Algebraic Fractions	MH54.10	Algebraic Fractions 10: Factorise then Multiply
ebraic	MH54.11	Algebraic Fractions 11: Divide
Alge	MH54.12	Algebraic Fractions 12: Solve
	MH54.13	Algebraic Fractions 13: Problem Solving
	MF21.03	Using Kinematics
	MF21.04	Recalling and Using Formulae 1
	MH21.11	Recalling and Using Formulae 2
9	MF21.05	Rearranging Formulae: One Step
Formulae	MF21.06	Rearranging Formulae: Two Step
Ľ	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
od Od	MH55.01	Introduction to Algebraic Proof
Algebraic Proof	MH55.02	Algebraic Proof 1: Complete the Proof
gebra	MH55.03	Algebraic Proof 2
	MH55.04	Algebraic Proof: Disproving by Example
SU	MH56.01	Functions: Key Concept
Functions	MI56.18	Functions: Domain
<u> </u>	MI56.19	Functions: Range

Strands	Code	Nugget Name
	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)
Functions	MH56.09	Composite Functions: Substitution 3 (3 Functions)
Fund	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
	MF22.05	Linear Sequences: Using the nth Term 1 (Substitute)
	MF22.06	Linear Sequences: Using the nth Term 2 (Solve)
Sednences	MI22.20	Sequences: a + (n – 1)d
Sedu	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

Strands	Code	Nugget Name
	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
Sednences	MH22.14	Subscript Notation
Seque	MH22.15	Unusual Sequences
	MH22.16	Quadratic Sequences 1: n <sup>2</sup> + c
	MH22.17	Quadratic Sequences 2: an² + c
	MH22.18	Quadratic Sequences 3: an² + bn + c
	MH22.19	Quadratic Sequences 4: $an^2 + bn + c$ and $(an + b)^2$
	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
aphs	MF23.07	Plotting Straight Line Graphs: 4 Quadrants
ne Gr	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
Strai	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
	MF23.15	Rearranging y = mx + c
	MF23.16	Finding Parallel Lines
	MH23.21	Finding Perpendicular Lines 1: Gradient
shs	MH23.22	Finding Perpendicular Lines 2: Equation
Grag	MH23.23	Finding Perpendicular Lines 3: Problem Solving
Straight Line Graphs	MH23.24	Equation of a Tangent 1: Circle Given
traigh	MH23.25	Equation of a Tangent 2: Mixed Exercise
ζ	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
	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
SU	MF24.04	Quadratic Graphs: Finding the Line of Symmetry
Grap	MF24.05	Quadratic Graphs: Finding the Turning Point
)ther	MF24.06	Quadratic Graphs: Finding the Roots
c and C	MH24.13	Quadratic Graphs: Turning Point from Completing Square 1: $y = (x + q)^2 + r$ Given
Quadratic and Other Graphs	MH24.14	Quadratic Graphs: Turning Point from Completing Square 2: $y = (x + q)^2 + r$ Not Given
ŏ	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
	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
sho	MF24.10	Approximate Solutions Using a Graph
r Grap	MH24.24	Transforming Graphs: Translating Vertical
Quadratic and Other Graphs	MH24.25	Transforming Graphs: Translating Horizontal
c and	MH24.26	Transforming Graphs: Reflections
adrati	MH24.27	Transforming Graphs: Stretching y-direction
ð	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
	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
v	MH25.14	Solving Inequalities: Quadratics 1
Inequalities	MH25.15	Solving Inequalities: Quadratics 2 (Rearranging)
Inequ	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
	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
Ö	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
Φ	MF38.07	Speed, Distance and Time: Mixed Questions
	MF38.08	Converting Units with Speed, Distance and Time
	MF38.19	Distance-Time Graphs: Drawing
easur	MF38.20	Distance-Time Graphs: Interpreting
¥ P L	MF38.21	Distance-Time Graphs: Speed
Compound Measure	MH38.22	Velocity-Time Graph: Interpreting
ŏ	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
ale Dı nd Be	MF39.08	Finding Bearings 1
So	MF39.09	Finding Bearings 2: Using Co-interior Angles
	MH57.01	Angle in a Semicircle and Angle at Tangent
	MH57.02	Properties of Diameter and Radii
	MH57.03	Tangents from an External Point
rems	MH57.04	Angles at the Centre
Circle Theorems	MH57.05	Angles on the Same Arc
Circle	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
	MI57.14	Intersecting Secant Theorem
	MH57.09	Mixed Circle Theorems 1: Practice
ems	MH57.10	Mixed Circle Theorems 2: Algebra
lheor	MH57.11	Mixed Circle Theorems 3: Two Theorems
Circle Theorems	MH57.12	Mixed Circle Theorems 4: Challenge
O	MI57.15	Mixed Circle Theorems 5: Including Chord and Secant Theorems
	MI57.16	Mixed Circle Theorems 6: Challenge incl. Chord and Secant 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
	MF41.05	Geometric Vectors 1: One Term
ors	MF41.06	Geometric Vectors 2: Two Terms
Vectors	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
as	MF44.01	Pythagoras' Theorem
	MF44.02	Pythagoras: Finding the Hypotenuse
	MF44.03	Pythagoras: Finding a Short Side
Pythagoras	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)
Trigo	MF45.05	Trigonometry: Missing Angle
ngled	MF45.06	Trigonometry: Worded Questions
ght-A	MF45.07	Exact Trigonometric Values
<u>~</u>	MF45.08	Trigonometry and Pythagoras
	MI45.09	Shortest Distance
	MI45.10	Simple Trigonometric Equations
etry	MH58.01	Area using 1/2(ab)sin(C): Proof
опош	MH58.02	1/2(ab)sin(C): Finding the area
Advanced Trigonometry	MH58.03	1/2(ab)sin(C): Area with Missing Value
/ance	MH58.04	1/2(ab)sin(C): Applied
Adv	MH58.05	Sine Rule: Proof

Strands	Code	Nugget Name
	MH58.06	Sine Rule: Sides
	MH58.07	Sine Rule: Angles
	MH58.08	Sine Rule: Applied
	MH58.09	Cosine Rule: Proof
etry	MH58.10	Cosine Rule: Finding a
шошо	MH58.11	Cosine Rule: Finding A
Advanced Trigonometry	MH58.12	Cosine Rule: Applied
ance	MH58.13	Choosing the Correct Trigonometric Rule
Adv	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
	MH59.01	3D Pythagoras 1: Cuboids
3D Trigonometry	MH59.02	3D Pythagoras 2: Pyramids and Cylinders
louoß	MH59.03	3D SOH CAH TOA
3D Tri	MH59.04	3D Trigonometry
	MH59.05	3D Trigonometry: Problem Solving
	MF46.04	Mutually Exclusive Events
billity	MF46.12	Multiplication Law of Probability (AND)
Probability	MF46.13	Addition Law of Probability (OR)
	MH46.19	Addition Law of Probability (General OR)

Strands	Code	Nugget Name
	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)
<u>≩</u>	MH46.21	Tree Diagrams 6: AND/OR Statements (No Tree Given)
Probability	MH46.22	Tree Diagrams 7: NOT Statements
Pr	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
	MF47.01	Set Notation
	MF47.02	Elements in a Set 1: Identifying Elements
ams	MF47.03	Elements in a Set 2: Unions and Intersections
Diagr	MF47.04	Elements in a Set 3: Complements
Sets and Venn Diagrams	MI47.25	Subsets: Introduction
and	MI47.23	Subsets: Proper Subsets
Sets	MI47.24	Subsets: Problem Solving
	MF47.05	Introduction to Venn Diagrams
	MF47.06	Constructing Venn Diagrams 1: Listing Elements

Strands	Code	Nugget Name
	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
grams	MH47.15	Venn Diagrams with Algebra
nr Dia	MF47.10	Probabilities with Venn Diagrams 1: 2-Set Diagrams
Sets and Venn 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)
<u>.</u>	MF48.01	Hypotheses, Primary Data and Secondary Data
Collecting Data	MF48.02	Discrete and Continuous Data
ollecti	MF48.05	Types of Random Sampling
<u></u>	MF48.06	Fair Samples
/sing	MF49.16	Mean from Grouped Frequency Table 1: Discrete and Continuous Data
Analysing Data	MF49.17	Mean from Grouped Frequency Table 2: Continuous Data
		_

Strands	Code	Nugget Name
	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
Plots	MH60.05	Cumulative Frequency 5: Median
Вох	MH60.06	Cumulative Frequency 6: Quartiles
yand	MH60.07	Cumulative Frequency 7: Interquartile Range
Cumulative Frequency and Box Plots	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
	MH61.01	Frequency Density 1: Calculating
	MH61.02	Frequency Density 2: Problem Solving
SE SE	MH61.03	Histograms 1: Choosing Axes
Histograms	MH61.04	Histograms 2: Plotting
ij	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)

MH61.08 Histograms 6: Finding Fractions and Percentages	
MH61.09 Histograms 7: Finding Proportions	
MH61.09 Histograms 7: Finding Proportions  MH61.10 Histograms 8: Median  MH61.11 Histograms 9: Mean	
MH61.11 Histograms 9: Mean	
MH61.12 Histograms 10: Mixed Exercise (Consolidates 6-9)	
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	
PHH4.01 Speed and Velocity  PHH4.02 Acceleration and Deceleration  PHH4.03 Motion Graphs: Distance-Time Graphs	
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	
MI62.01 Differentiating Functions 1: Single Term	
MI62.02 Differentiating Functions 2: Multiple Terms  MI62.03 Differentiating Functions 3: Negative Powers	
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

