

# LEARNING LADDERS

## MATHS

NAME

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CLASS

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MATHS LADDER  
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# TIMES TABLES

YEAR 5

I can recall quickly all the multiplication and division facts for tables up to  $12 \times 12$  and can use them confidently in larger calculations

COMPLETE?

COMPLETE?

COMPLETE?

I can recall and use the multiplication and division facts for all tables up to  $12 \times 12$

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

I can recall and use the multiplication and division facts for the 7 times tables

COMPLETE?

COMPLETE?

COMPLETE?

I can recall and use the multiplication and division facts for the 6 and 9 times tables recognising their relationship to the 3 times table

COMPLETE?

COMPLETE?

COMPLETE?

I can recall and use the multiplication and division facts for the 8 times tables recognising its relationship to the 4 times table

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

I can recall and use the multiplication and division facts for the 3 and 4 times tables

COMPLETE?

COMPLETE?

COMPLETE?

I can recall and use the multiplication facts for the 3 and 4 times tables

COMPLETE?

COMPLETE?

COMPLETE?

I can recall and use division facts for 2, 5 and 10 times tables

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can recall and use multiplication facts for 2, 5 and 10 times tables

COMPLETE?

COMPLETE?

COMPLETE?

I can count in 3's from zero

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can count in 2's, 5's and 10's from zero

COMPLETE?

COMPLETE?

COMPLETE?

MATHS LADDER  
NOTES

# MATHS LADDER

## ADDITION

YEAR 3

I can add 2 digit numbers and 3 digit numbers using column addition

COMPLETE?

COMPLETE?

COMPLETE?

I can estimate the answer to an addition calculation or use the inverse to check it is correct

COMPLETE?

COMPLETE?

COMPLETE?

I can add 2 digit numbers and 3 digit numbers using expanded column addition (Written strategy 2)

COMPLETE?

COMPLETE?

COMPLETE?

I can partition 2 and 3 digit numbers and add vertically using base 10 or practical resources without crossing boundaries

COMPLETE?

COMPLETE?

COMPLETE?

I can add 10 or 100 to any number and can add in multiples of 10

COMPLETE?

COMPLETE?

COMPLETE?

I can partition a number to add using number bonds to 10 e.g.  $8+7$  is  $8+2+5$

COMPLETE?

COMPLETE?

COMPLETE?

I can add in tens and ones using an unstructured number line

COMPLETE?

COMPLETE?

COMPLETE?

I know my number facts to 20

COMPLETE?

COMPLETE?

COMPLETE?

I can add in tens and ones using a structured number line

COMPLETE?

COMPLETE?

COMPLETE?

I can add in ones using a structured number line

COMPLETE?

COMPLETE?

COMPLETE?

I can add in ones using practical resources

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

YEAR 1

# MATHS LADDER

## ADDITION

I can add a mix of whole numbers and decimals with different numbers of decimal places using column addition			YEAR 5
COMPLETE?	COMPLETE?	COMPLETE?	
I can use rounding to estimate and check answers to calculations			
COMPLETE?	COMPLETE?	COMPLETE?	
I can add large numbers in different contexts using formal column addition			
COMPLETE?	COMPLETE?	COMPLETE?	
I can add money with decimal places using formal column addition			
COMPLETE?	COMPLETE?	COMPLETE?	
I can add 3 and 4 digit numbers using formal column addition			
COMPLETE?	COMPLETE?	COMPLETE?	
I can use inverse operations to check calculations			YEAR 4
COMPLETE?	COMPLETE?	COMPLETE?	
I can add money with decimal places using expanded column addition			
COMPLETE?	COMPLETE?	COMPLETE?	
I can add using both £ and p in practical contexts			
COMPLETE?	COMPLETE?	COMPLETE?	

# MATHS LADDER

## SUBTRACTION

YEAR 3

I can subtract money using both £ and p to give change in practical contexts

COMPLETE?

COMPLETE?

COMPLETE?

I can subtract 2 and 3 digit numbers using column subtraction without decomposing

COMPLETE?

COMPLETE?

COMPLETE?

I can estimate the answer to a subtraction calculation or use the inverse to check it is correct

COMPLETE?

COMPLETE?

COMPLETE?

I can partition a number and subtract using column subtraction without decomposing (2 and 3 digit numbers)

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can use related facts to subtract multiples of 10 and 100 e.g.  $6-4=2$   $60-40=20$

COMPLETE?

COMPLETE?

COMPLETE?

I can subtract more efficiently using a number line using jumps of multiples of 10 with numbers up to 3 digits

COMPLETE?

COMPLETE?

COMPLETE?

I know all the subtraction facts to 20

COMPLETE?

COMPLETE?

COMPLETE?

I can subtract in tens and ones using a unstructured number line

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can subtract in tens and ones using a structured number line

COMPLETE?

COMPLETE?

COMPLETE?

I can subtract in ones using a structured number line

COMPLETE?

COMPLETE?

COMPLETE?

I can subtract in ones using practical resources

COMPLETE?

COMPLETE?

COMPLETE?



# MATHS LADDER

## SUBTRACTION

I can subtract a mix of whole numbers and decimals with different numbers of decimal places using column subtraction	COMPLETE?	COMPLETE?	COMPLETE?	YEAR 5
I can use rounding to check answers to calculations	COMPLETE?	COMPLETE?	COMPLETE?	
I can subtract large numbers using formal column subtraction	COMPLETE?	COMPLETE?	COMPLETE?	
I can subtract 3 and 4 digit numbers using formal column subtraction	COMPLETE?	COMPLETE?	COMPLETE?	YEAR 4
I can use the inverse to check calculations	COMPLETE?	COMPLETE?	COMPLETE?	
I can subtract 3 digit numbers by partitioning and decomposing using column subtraction	COMPLETE?	COMPLETE?	COMPLETE?	
I can subtract money including decimals using a number line e.g. finding the change from £5.00	COMPLETE?	COMPLETE?	COMPLETE?	

# MULTIPLICATION

YEAR 4

I can multiply 3 numbers, combining them in different ways and using my knowledge of number facts to make this easier e.g.  $2 \times 6 \times 5 = 10 \times 6$  derived from  $(2 \times 5) \times 6$

COMPLETE?

COMPLETE?

COMPLETE?

I can use a formal vertical method to multiply TO and HTO by O

COMPLETE?

COMPLETE?

COMPLETE?

I can use an expanded vertical method to multiply money with 2 decimal places by O (a one digit number)

COMPLETE?

COMPLETE?

COMPLETE?

I can use an expanded vertical method to multiply TO and HTO by O

COMPLETE?

COMPLETE?

COMPLETE?

I can use related facts to multiply multiples of 10 and 100 e.g.  $2 \times 3 = 6$ ,  $2 \times 30 = 60$ ,  $2 \times 300 = 600$

COMPLETE?

COMPLETE?

COMPLETE?

I can partition a number into 10's and ones to multiply (distributive law)

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

I can use related facts to multiply multiples of 10 e.g.  $2 \times 3 = 6$   $2 \times 30 = 60$

COMPLETE?

COMPLETE?

COMPLETE?

I can explore the effect of partitioning a number to multiply (distributive law) e.g. exploring  $7 \times 8$  by splitting 7 into 2 and 5 then calculating  $2 \times 8$  then  $5 \times 8$

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I know that multiplication can be done in any order (commutative)

COMPLETE?

COMPLETE?

COMPLETE?

I can multiply using concrete objects, pictorial representations arrays and repeated addition

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can multiply using concrete objects, pictorial representations and arrays with the support of the teacher

COMPLETE?

COMPLETE?

COMPLETE?

# MULTIPLICATION

YEAR 6	I can use long multiplication to multiply THTO or HTO x TO	COMPLETE?	COMPLETE?	COMPLETE?
	I can use related facts to multiply multiples of 10 and 100 e.g. $2 \times 3 = 6$ $200 \times 30 = 6000$	COMPLETE?	COMPLETE?	COMPLETE?
	I can multiply numbers with up to 2 decimal places by a whole numbers	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 5	I can multiply TO x TO using long multiplication	COMPLETE?	COMPLETE?	COMPLETE?
	I can multiply TO x TO using an expanded written strategy	COMPLETE?	COMPLETE?	COMPLETE?
	I can multiply TO x TO using diagrams, arrays and grids	COMPLETE?	COMPLETE?	COMPLETE?
	I can use related facts to multiply multiples of 10 and 100 e.g. $2 \times 3 = 6$ , $20 \times 30 = 600$	COMPLETE?	COMPLETE?	COMPLETE?
	I can use a formal vertical method to multiply HTO, THHTO and whole numbers with up to 2 decimal places (e.g. money) by O	COMPLETE?	COMPLETE?	COMPLETE?
		COMPLETE?	COMPLETE?	COMPLETE?

# MATHS LADDER

## DIVISION

YEAR 5

I can divide numbers up to 4 digits by a 2 digit whole number using expanded long division

COMPLETE?

COMPLETE?

COMPLETE?

I can begin to represent a remainder as a fraction or decimal

COMPLETE?

COMPLETE?

COMPLETE?

I can solve more complex problems involving division including with remainders and round the answer appropriately in context

COMPLETE?

COMPLETE?

COMPLETE?

I can divide 4 digit and three digit numbers by one digit using short division

COMPLETE?

COMPLETE?

COMPLETE?

I can divide 3 digit numbers using increasingly efficient written methods and using related multiplication facts

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

I can divide 2 digit numbers by increasingly efficient written methods and use related multiplication facts

COMPLETE?

COMPLETE?

COMPLETE?

I understand the effect of dividing by 1

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

I can divide 2 digit numbers by another number using the tables I know

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I know that division of one number by another can not be done in any order

COMPLETE?

COMPLETE?

COMPLETE?

I can divide using concrete objects , pictorial representations and arrays and repeated subtraction

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can divide using concrete objects , pictorial representations and arrays with the support of the teacher

COMPLETE?

COMPLETE?

COMPLETE?

# MATHS LADDER

## DIVISION

I can divide numbers up to 4 digits by a 2 digit whole number using long division

COMPLETE?

COMPLETE?

COMPLETE?

I can express a quotient as a fraction, decimal or rounded according to context

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6

# MATHS LADDER

## FRACTIONS

YEAR 3

I can recognise and show using diagrams, simple equivalent fractions

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order unit fractions with the support of fraction boards and number lines

COMPLETE?

COMPLETE?

COMPLETE?

I can add and subtract fractions with the same denominator and recognise a whole as a fraction e.g.  $\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order fractions with the same denominator

COMPLETE?

COMPLETE?

COMPLETE?

I can work out fractions of amounts for common fractions e.g.  $\frac{1}{2}$   $\frac{1}{4}$   $\frac{3}{4}$   $\frac{1}{5}$  of a set of objects

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise fractions of shapes (unit and non-unit)

COMPLETE?

COMPLETE?

COMPLETE?

I can count in halves and quarters up to 10 recognising that fractions are numbers between whole numbers

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can recognise the equivalence of  $\frac{2}{4}$  to  $\frac{1}{2}$

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise, find, name and write fractions  $\frac{1}{3}$   $\frac{1}{4}$   $\frac{3}{4}$  and  $\frac{3}{4}$  of a length, shape, set of objects or quantity

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise, find and name a quarter of an object, shape or quantity

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise, find and name a half of an object, shape or quantity

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

MATHS LADDER  
FRACTIONS

I can use common multiples to express fractions in the same denomination

COMPLETE?

COMPLETE?

COMPLETE?

I can simplify fractions using common factors

COMPLETE?

COMPLETE?

COMPLETE?

I can multiply proper fractions and mixed numbers by a whole number using diagrams and concrete apparatus

COMPLETE?

COMPLETE?

COMPLETE?

I can add and subtract fractions with denominators in the same fraction family

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order fractions where denominators are in the same fraction family

COMPLETE?

COMPLETE?

COMPLETE?

I can add and subtract fractions with the same denominators including recognising and converting improper fractions to mixed numbers

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and converting improper fractions to mixed numbers

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and work out non- unit fractions of shapes, lengths and sets of objects. e.g.  $\frac{3}{4}$  of a metre, or  $\frac{3}{5}$  of a bar of chocolate made of 20 pieces

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and work out unit fractions of shapes, lengths and sets of objects e.g.  $\frac{1}{8}$  of a bar of chocolate made of 40 pieces

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and show equivalent fractions in a family of fractions

COMPLETE?

COMPLETE?

COMPLETE?

I can add and subtract fractions where the denominator is the same beyond a whole

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 5

YEAR 4

# MATHS LADDER

## FRACTIONS

YEAR 6 (extension)

I can multiply more complex pairs of proper fractions e.g.  $\frac{3}{5} \times \frac{4}{7}$

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and explore the relationship between multiplying by a whole number and dividing by its reciprocal

COMPLETE?

COMPLETE?

COMPLETE?

I can divide proper fractions by a whole number e.g.  $\frac{1}{3} \div 2 = \frac{1}{6}$

COMPLETE?

COMPLETE?

COMPLETE?

I can multiply simple pairs of proper fractions and write the answer in its simplest form e.g.  $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$

COMPLETE?

COMPLETE?

COMPLETE?

I can add and subtract fractions and mixed numbers with different denominators using the idea of equivalence

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order any set of fractions, proper or improper, or mixed numbers including those with different denominators

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6



MATHS LADDER  
NOTES

# MATHS LADDER

## DECIMALS

YEAR 5

I can round decimals with 2 decimal places to the nearest whole number and to one decimal place

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order whole numbers and decimals with up to 2 decimal places

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order decimals with the same number of decimal places up to 2 decimal places

COMPLETE?

COMPLETE?

COMPLETE?

I can find the effect of dividing one and two digit numbers by 10 and 100 and identify the value of the digits in the answer as ones (units), tenths and hundredths.

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and write the decimal equivalent of tenths, hundredths and common fractions ( $\frac{1}{4}$   $\frac{1}{2}$   $\frac{3}{4}$ ) in a variety of contexts e.g. money and measures

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

I can write the decimal equivalent of tenths and hundredths and recognise them in the context of money

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise a hundredth as a whole divided into 100 equal parts and as 10 parts of a tenth

COMPLETE?

COMPLETE?

COMPLETE?

I can round a decimal with one decimal place to a whole number

COMPLETE?

COMPLETE?

COMPLETE?

I can count in tenths and decimal tenths recognising them as numbers between whole numbers

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

I can recognise and write the decimal equivalent of a tenth using a place value board e.g.  $\frac{1}{10} = 0.1$

COMPLETE?

COMPLETE?

COMPLETE?

I can count in tenths and understand a tenth as part of a whole divided into 10 equal parts

COMPLETE?

COMPLETE?

COMPLETE?

# MATHS LADDER

## DECIMALS

When using a calculator to solve problems, I can round the answer appropriately in context			
COMPLETE?	COMPLETE?	COMPLETE?	
I can recognise what degree of accuracy is appropriate when rounding decimals			
COMPLETE?	COMPLETE?	COMPLETE?	
I can round answers with a specific degree of accuracy (where this has been specified)			
COMPLETE?	COMPLETE?	COMPLETE?	
I can calculate more complex decimal equivalents such as $\frac{3}{8} = 0.375$ using my understanding of the equivalence between fractions and decimals			
COMPLETE?	COMPLETE?	COMPLETE?	
I can associate a fraction with division and calculate decimal equivalents of common fractions such as halves, quarters and fifths			
COMPLETE?	COMPLETE?	COMPLETE?	
I can multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places			
COMPLETE?	COMPLETE?	COMPLETE?	
I can read, write order and compare numbers that have a mixture of 1, 2 or 3 decimal places			
COMPLETE?	COMPLETE?	COMPLETE?	
I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents			
COMPLETE?	COMPLETE?	COMPLETE?	

YEAR 6 (extension)

YEAR 6

# PERCENTAGE AND RATIO

YEAR 6 (Extension)

I can solve more complex problems using a unitary method (i.e. scaling down to 1 and then up again)

COMPLETE?

COMPLETE?

COMPLETE?

I can link % to calculating simple angles in a pie chart (e.g. recognise that 50% is 180°)

COMPLETE?

COMPLETE?

COMPLETE?

I can solve more complex % problems in context such as % deduction

COMPLETE?

COMPLETE?

COMPLETE?

I can divide a quantity in a given ratio (recognising the proportion as a fraction of the whole)

COMPLETE?

COMPLETE?

COMPLETE?

I can identify that a problem can be written as a ratio and solve problems using this relationship

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6

I can solve problems involving similar shapes where the scale factor is known or can be found

COMPLETE?

COMPLETE?

COMPLETE?

I can solve % problems in a variety of contexts such as comparing % (e.g. best buys)

COMPLETE?

COMPLETE?

COMPLETE?

I can recall and use equivalence between fractions, decimals and % to solve problems e.g. 10% of £5.00 or 50% of the team

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 5

I can recognise and understand % as part of 100 and write a % as a fraction and a decimal

COMPLETE?

COMPLETE?

COMPLETE?

MATHS LADDER  
NOTES

# PROBLEM SOLVING

YEAR 3

I can solve 1 step word problems involving addition and subtraction (including numbers beyond 100)

COMPLETE?

COMPLETE?

COMPLETE?

I can solve missing number problems for addition, subtraction, multiplication and division with numbers up to 100 using my knowledge of number facts and the relationship between operations

COMPLETE?

COMPLETE?

COMPLETE?

I can solve money problems involving addition and finding the change (both £ and pence)

COMPLETE?

COMPLETE?

COMPLETE?

I can solve simple money problems involving addition and finding the change (£ or pence)

COMPLETE?

COMPLETE?

COMPLETE?

I can use place value and number facts to solve problems

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can solve multiplication and division problems using pictures and diagrams

COMPLETE?

COMPLETE?

COMPLETE?

I can solve simple word problems involving addition and subtraction with numbers up to 50

COMPLETE?

COMPLETE?

COMPLETE?

I can solve missing number problems for addition and subtraction with numbers up to 20

COMPLETE?

COMPLETE?

COMPLETE?

I can solve practical problems in the context of measure e.g. length, weight, capacity and time

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can solve multiplication and division 1 step word problems using concrete apparatus (2,5 and 10 x tables only)

COMPLETE?

COMPLETE?

COMPLETE?

I can solve addition and subtraction 1 step word problems using concrete apparatus

COMPLETE?

COMPLETE?

COMPLETE?

# PROBLEM SOLVING

I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

COMPLETE?

COMPLETE?

COMPLETE?

I can solve more complex correspondence problems, choosing how to tackle and present the problem clearly (e.g. 'share 3 cakes equally between 10 children' or '3 starters, 3 mains, 3 desserts how many different meal options?')

COMPLETE?

COMPLETE?

COMPLETE?

I can solve more complex scaling problems (e.g. 8 times as high)

COMPLETE?

COMPLETE?

COMPLETE?

I can solve 2 step word problems involving all 4 operations, deciding which operations to use and when

COMPLETE?

COMPLETE?

COMPLETE?

I can solve 2 step word problems involving addition and subtraction deciding which operations to use and when

COMPLETE?

COMPLETE?

COMPLETE?

I can estimate answers and use inverse operations to check answers to a calculation in the context of a problem

COMPLETE?

COMPLETE?

COMPLETE?

I can solve missing number problems with increasingly large numbers using my knowledge of place value and relationships between operations

COMPLETE?

COMPLETE?

COMPLETE?

I can solve simple scaling problems (e.g. twice as long)

COMPLETE?

COMPLETE?

COMPLETE?

I can estimate an answer to an addition or subtraction problem and use the inverse to check an answer

COMPLETE?

COMPLETE?

COMPLETE?

I can solve simple correspondence problems (e.g. 'share 4 cakes equally between 8 children' or '4 hats, 3 coats, how many different outfits?')

COMPLETE?

COMPLETE?

COMPLETE?

I can solve 1 step word problems involving multiplication and division

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

# PROBLEM SOLVING

YEAR 6

I can express missing number problems algebraically

COMPLETE?

COMPLETE?

COMPLETE?

I can solve multi-step word problems and investigations involving all 4 operations from a large range of contexts

COMPLETE?

COMPLETE?

COMPLETE?

I can round and estimate as a means of predicting and checking the order of magnitude of my answers to a decimal calculation

COMPLETE?

COMPLETE?

COMPLETE?

I consistently check the reasonableness of my answer in all calculations

COMPLETE?

COMPLETE?

COMPLETE?

I can solve addition and subtraction multi-step problems in context, with increasingly large numbers, deciding which operations to use and why

COMPLETE?

COMPLETE?

COMPLETE?

I can investigate a problem involving place value and properties of number, and present my investigation in a clear and organised way

COMPLETE?

COMPLETE?

COMPLETE?

I can use all 4 operations to solve equivalence statements (e.g.  $5x = 18 + 12$ )

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 5

I can solve multi step problems involving a combination of any of the 4 operations

COMPLETE?

COMPLETE?

COMPLETE?

I can solve problems involving multiplication and division including scaling by simple fractions

COMPLETE?

COMPLETE?

COMPLETE?

I can solve division problems interpreting remainders in context and adjusting the answer appropriately

COMPLETE?

COMPLETE?

COMPLETE?

I can solve addition and subtraction multi-step problems in context, deciding which operations to use and why

COMPLETE?

COMPLETE?

COMPLETE?



I can solve real life and financial problems e.g. comparing holiday packages or working out household bills			YEAR 6 (Extension)
COMPLETE?	COMPLETE?	COMPLETE?	
I can solve a variety of number problems using formulae and algebraic equations			
COMPLETE?	COMPLETE?	COMPLETE?	
I can find pairs of numbers that satisfy an equation with two unknowns			
COMPLETE?	COMPLETE?	COMPLETE?	

# PROPERTIES OF NUMBER

YEAR 5

I can explore the order of operations using brackets

COMPLETE?

COMPLETE?

COMPLETE?

I can identify common factors, common multiples and prime numbers, with increasingly large numbers

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise squared and cubed numbers and use the correct notation

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and describe linear number sequences including those involving fractions and decimals and find the term to term e.g. add half

COMPLETE?

COMPLETE?

COMPLETE?

I can work out if a number up to 100 is a prime number and have quick recall of all the prime numbers to 19

COMPLETE?

COMPLETE?

COMPLETE?

I know and use the vocabulary of prime numbers, prime factor and composite (non-prime) numbers

COMPLETE?

COMPLETE?

COMPLETE?

I can identify multiples and factors including finding all factor pairs of a number and common factors of two numbers

COMPLETE?

COMPLETE?

COMPLETE?

I can use the = sign to write equality statements for addition, subtraction and multiplication

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

I can recognise patterns across all the multiplication tables

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise factor pairs of a number and multiples of single digit numbers

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

I can recognise patterns in some multiplication tables (2, 5, 10, 4 and 8)

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6 (extension)	I can identify the region for solutions of square roots (not square numbers) and use this as a starting point for trial and improvement		
	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 6	I can identify square roots and cube roots which give integer solutions (whole number answers)		
	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 6	I can make generalisations about number patterns and express them algebraically		
	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 6	I can generate and describe linear number sequences		
	COMPLETE?	COMPLETE?	COMPLETE?

# MATHS LADDER

## MEASURES

YEAR 3

I can read measuring instruments with increasing accuracy

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order measures and record using  $<$   $>$  and  $=$

COMPLETE?

COMPLETE?

COMPLETE?

I can find different combinations of coins that equal the same amounts

COMPLETE?

COMPLETE?

COMPLETE?

I can combine amounts to make a particular value e.g. make 3p using a 2p and 1p

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can recognise and use symbols for £ and p

COMPLETE?

COMPLETE?

COMPLETE?

I can choose appropriate units of measure to estimate length, height, mass and capacity

COMPLETE?

COMPLETE?

COMPLETE?

I can measure using appropriate equipment e.g. ruler, weighing scales, measuring jug

COMPLETE?

COMPLETE?

COMPLETE?

I recognise and know the value of different denominations of coins and notes

COMPLETE?

COMPLETE?

COMPLETE?

I can compare, describe, measure and record weight and mass

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can compare, describe, measure and record capacity and volume

COMPLETE?

COMPLETE?

COMPLETE?

I can compare, describe, measure and record length and height

COMPLETE?

COMPLETE?

COMPLETE?

# MATHS LADDER

## MEASURES

I can estimate volume and capacity and explore these concepts using practical materials

COMPLETE?

COMPLETE?

COMPLETE?

I can use all 4 operations to solve problems involving length, mass, capacity and scaling

COMPLETE?

COMPLETE?

COMPLETE?

I can convert between different units of measure using my understanding of  $\times$  and  $\div$  by 10, 100 and 1000

COMPLETE?

COMPLETE?

COMPLETE?

I can estimate, compare and calculate measures in a variety of contexts

COMPLETE?

COMPLETE?

COMPLETE?

I can convert between units of measure using multiplication and division and where appropriate record with decimal notation

COMPLETE?

COMPLETE?

COMPLETE?

I can convert between units of measure with the support of measuring instruments and where appropriate record with decimal notation

COMPLETE?

COMPLETE?

COMPLETE?

I can use both £ and p in context and recognise equivalence e.g. 306p = £3.06

COMPLETE?

COMPLETE?

COMPLETE?

I can read measures in mixed units and can convert simple whole units of measure e.g. 5m = 500 cm

COMPLETE?

COMPLETE?

COMPLETE?

I can solve problems involving measures including simple problems of scale e.g. twice as high

COMPLETE?

COMPLETE?

COMPLETE?

I can add and subtract amounts of money to give change, using both £ and p in practical contexts

COMPLETE?

COMPLETE?

COMPLETE?

I can compare, add and subtract measures

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 5

YEAR 4

MATHS LADDER  
MEASURES

YEAR 6  
(Extension)

I can understand compound units for speed and use them in context e.g. science experiments

COMPLETE?

COMPLETE?

COMPLETE?

I can convert between miles and km

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise when it is possible to use formulae to calculate volume

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6

I can calculate, estimate and compare volume of cubes and cuboids using standard units e.g.  $\text{cm}^3$

COMPLETE?

COMPLETE?

COMPLETE?

I can solve problems involving the calculation and conversion of units of measure using decimal notation up to three decimal places

COMPLETE?

COMPLETE?

COMPLETE?

I can use, read, write and convert between standard units of measure using decimal notation up to 3 decimal places

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 5

I can understand and use approximate equivalences between metric units and common imperial units (inches, pounds, pints)

COMPLETE?

COMPLETE?

COMPLETE?

MATHS LADDER  
NOTES

# TIME

YEAR 3

I can record time in seconds, minutes and hours and can compare lengths of time (e.g. which is longer)

COMPLETE?

COMPLETE?

COMPLETE?

I understand and use vocabulary such as o'clock, am, pm, noon and midnight

COMPLETE?

COMPLETE?

COMPLETE?

I can use the vocabulary of time and know the number of seconds in a minute, days in each month, year and leap year

COMPLETE?

COMPLETE?

COMPLETE?

I can tell and write the time to 5 minutes and draw the hands on a clock face to show these times

COMPLETE?

COMPLETE?

COMPLETE?

I can read and write the time on an analogue clock for quarter past and quarter to

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and sequence intervals of time

COMPLETE?

COMPLETE?

COMPLETE?

I know how many hours there are in a day and how many minutes in an hour

COMPLETE?

COMPLETE?

COMPLETE?

I can read and write the time on an analogue clock for o'clock and half past

COMPLETE?

COMPLETE?

COMPLETE?

I can compare, describe, measure and record time (hours, minutes, seconds) and use the language quicker, slower, earlier, later

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and use language relating to dates including days of the week, months and the term 'year'

COMPLETE?

COMPLETE?

COMPLETE?

I can sequence events in chronological order using before, after, today, tomorrow etc.

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

YEAR 1



YEAR 5	I can solve problems involving time including reading simple timetables	COMPLETE?	COMPLETE?	COMPLETE?
	I can solve problems which involve converting between units of time e.g. expressing the answer as days and weeks	COMPLETE?	COMPLETE?	COMPLETE?
	I can convert hours to minutes, minutes to seconds, years to months or weeks to days	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 4	I can solve problems involving calculating lengths of time	COMPLETE?	COMPLETE?	COMPLETE?
	I can read, write and convert time between analogue and digital 12 and 24 hour clocks	COMPLETE?	COMPLETE?	COMPLETE?
	I can read the time on a 24 hour digital clock	COMPLETE?	COMPLETE?	COMPLETE?
	I can read the time on a digital clock (12 hour) and compare to an analogue clock	COMPLETE?	COMPLETE?	COMPLETE?
	I can calculate and compare time durations	COMPLETE?	COMPLETE?	COMPLETE?
	I can read and write the time to the nearest minute on an analogue clock	COMPLETE?	COMPLETE?	COMPLETE?

# PERIMETER AND AREA

YEAR 6

I can calculate the area of parallelograms and triangles

COMPLETE?

COMPLETE?

COMPLETE?

I can investigate relationships between area and perimeter e.g. shapes with the same area can have different perimeters and vice versa

COMPLETE?

COMPLETE?

COMPLETE?

I can find unknown lengths on rectilinear shapes using my understanding of perimeter and area

COMPLETE?

COMPLETE?

COMPLETE?

I can calculate and compare the area of rectangles using  $\text{cm}^2$  and  $\text{m}^2$  including from scale drawings

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 5

I can estimate the area of irregular shapes

COMPLETE?

COMPLETE?

COMPLETE?

I can measure and calculate the area of shapes that need to be divided into rectangles (composite rectilinear shapes) in  $\text{cm}^2$  and  $\text{m}^2$

COMPLETE?

COMPLETE?

COMPLETE?

I can measure and calculate the perimeter of shapes that need to be divided into rectangles (composite rectilinear shapes) in  $\text{cm}$  and  $\text{m}$

COMPLETE?

COMPLETE?

COMPLETE?

I can calculate the area of rectangles using multiplication

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

I can find the area of rectangles by counting squares

COMPLETE?

COMPLETE?

COMPLETE?

I can calculate the perimeter of rectangles including squares

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

I can measure the perimeter of simple 2D shapes

COMPLETE?

COMPLETE?

COMPLETE?

# PERIMETER AND AREA

I can calculate area and perimeter of compound shapes including parallelograms and triangles

COMPLETE? COMPLETE? COMPLETE?

I can recognise when it is possible to use formulae to calculate area

COMPLETE? COMPLETE? COMPLETE?

YEAR 6  
(extension)

# MATHS LADDER

## STATISTICS

YEAR 4

I can present discrete data using appropriate graphical methods

COMPLETE?

COMPLETE?

COMPLETE?

I can interpret data presented in a range of graphical representations with a greater range of scales

COMPLETE?

COMPLETE?

COMPLETE?

I can solve 2 step problems using the information presented in charts and graphs e.g. how many more/fewer?

COMPLETE?

COMPLETE?

COMPLETE?

I can solve one step problems using the information presented in charts and graphs

COMPLETE?

COMPLETE?

COMPLETE?

I can present data in charts and graphs including using a scale of 2, 5 and 10

COMPLETE?

COMPLETE?

COMPLETE?

I can interpret data in charts and graphs including reading a scale of 2, 5 and 10

COMPLETE?

COMPLETE?

COMPLETE?

I can answer questions by comparing information in simple bar charts e.g. Which has the most? How much altogether?

COMPLETE?

COMPLETE?

COMPLETE?

I can interpret and construct simple pictograms and block diagrams

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can interpret and construct simple tally charts and tables

COMPLETE?

COMPLETE?

COMPLETE?

I can answer simple questions about quantities from looking at pictograms and block charts (scale of 1 or 2)

COMPLETE?

COMPLETE?

COMPLETE?

I can answer simple questions about quantities from looking at tally charts and simple tables

COMPLETE?

COMPLETE?

COMPLETE?

# MATHS LADDER

## STATISTICS

I can read and interpret linear proportional graphs (e.g. speed)

COMPLETE?

COMPLETE?

COMPLETE?

I can calculate the mean as an average and understand when it is appropriate to find the mean of a set of data

COMPLETE?

COMPLETE?

COMPLETE?

I can solve problems using the data from line graphs (including conversion graphs) and pie charts including ones I have constructed myself

COMPLETE?

COMPLETE?

COMPLETE?

I can construct a pie chart

COMPLETE?

COMPLETE?

COMPLETE?

I can interpret a pie chart

COMPLETE?

COMPLETE?

COMPLETE?

I can decide which representations of data are most appropriate and explain why

COMPLETE?

COMPLETE?

COMPLETE?

I can complete, read and interpret information presented in tables and other graphical representations

COMPLETE?

COMPLETE?

COMPLETE?

I can solve comparison, sum and difference problems using information presented in line graphs

COMPLETE?

COMPLETE?

COMPLETE?

I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

COMPLETE?

COMPLETE?

COMPLETE?

I can present continuous data in the form of time (line) graphs recognising that it is recording a change over time

COMPLETE?

COMPLETE?

COMPLETE?

I can interpret continuous data in the form of time (line) graphs recognising that it is recording a change over time

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6

YEAR 5

MATHS LADDER  
STATISTICS

YEAR 6  
(extension)

I can calculate the probability of an independent event

COMPLETE?

COMPLETE?

COMPLETE?

MATH LADDER  
NOTES

# SHAPE

YEAR 4

I can make 3D shapes using modelling materials and name and describe their properties

COMPLETE?

COMPLETE?

COMPLETE?

I can draw 2D shapes and describe them using my knowledge of sides and angles

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise right angles in 2D shapes and say if an angle is greater or less than a right angle

COMPLETE?

COMPLETE?

COMPLETE?

I can identify right angles and describe how right angles can make up  $\frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$  and a whole turn

COMPLETE?

COMPLETE?

COMPLETE?

I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and sort common 2D and 3D shapes and everyday objects

COMPLETE?

COMPLETE?

COMPLETE?

I can identify 2D shapes on the surface of 3D shapes e.g. a circle on a cylinder

COMPLETE?

COMPLETE?

COMPLETE?

I can identify, describe and sort 3D shapes by talking about the number of faces, edges and vertices

COMPLETE?

COMPLETE?

COMPLETE?

I can identify, describe and sort 2D shapes by naming them, talking about the number of sides and showing a vertical line of symmetry

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and name common 3D shapes (cuboid, cube, pyramid, sphere)

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise and name common 2D shapes (rectangle, circle, square, triangle)

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 3

YEAR 1



# SHAPE

I can calculate missing angles on a straight line ( $180^\circ$ ) or at a point ( $360^\circ$ ) or within a right angle ( $90^\circ$ )

COMPLETE?

COMPLETE?

COMPLETE?

I can identify 3D shapes from 2D representations

COMPLETE?

COMPLETE?

COMPLETE?

I can identify regular and irregular shapes using my knowledge of length of sides and angles

COMPLETE?

COMPLETE?

COMPLETE?

I can draw and measure given angles in degrees

COMPLETE?

COMPLETE?

COMPLETE?

I can identify and compare acute, obtuse and reflex angles

COMPLETE?

COMPLETE?

COMPLETE?

I can identify lines of symmetry in 2D shapes presented in different orientations

COMPLETE?

COMPLETE?

COMPLETE?

I can complete symmetrical shapes and patterns with respect to a specific line of symmetry

COMPLETE?

COMPLETE?

COMPLETE?

I can name, describe and sort a variety of quadrilaterals and triangles based on their properties

COMPLETE?

COMPLETE?

COMPLETE?

I can identify and name acute and obtuse angles

COMPLETE?

COMPLETE?

COMPLETE?

I can compare and order angles

COMPLETE?

COMPLETE?

COMPLETE?

I can recognise a 3D shape in different orientations

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 6

YEAR 4

YEAR 6 (Extension)	I can solve problems using my knowledge of circle properties	COMPLETE?	COMPLETE?	COMPLETE?
	I can recognise vertically opposite angles and use this to calculate missing angles	COMPLETE?	COMPLETE?	COMPLETE?
	I can illustrate and name parts of a circle including radius, diameter and circumference and know that diameter is twice the radius	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 6	I can compare and classify geometric shapes based on their size and properties and can find unknown angles in any triangle, quadrilateral or regular polygon	COMPLETE?	COMPLETE?	COMPLETE?
	I can recognise, describe and build simple 3D shapes including making nets	COMPLETE?	COMPLETE?	COMPLETE?
	I can accurately draw 2D shapes using given angles and dimensions	COMPLETE?	COMPLETE?	COMPLETE?
YEAR 5	I can find missing lengths and angles in rectangles using my knowledge of related facts	COMPLETE?	COMPLETE?	COMPLETE?

MATHS LADDER  
NOTES

# POSITION AND DIRECTION

YEAR 5

I can label the axes of a grid in all 4 quadrants and describe a position on the grid

COMPLETE?

COMPLETE?

COMPLETE?

I can identify, describe and draw the position of a shape on a grid after a translation

COMPLETE?

COMPLETE?

COMPLETE?

I can identify, describe and draw the position of a shape on a grid after a reflection on a line parallel to the axis

COMPLETE?

COMPLETE?

COMPLETE?

I can translate shapes on a grid and describe the movement using left/right, up/down

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 4

I can complete polygons by giving a missing co-ordinate on a grid

COMPLETE?

COMPLETE?

COMPLETE?

I can use co-ordinates to plot a shape on a grid (1st quarter)

COMPLETE?

COMPLETE?

COMPLETE?

I can describe positions on a 2D grid

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can distinguish between rotation as a turn and in terms of right angles for quarter, half and three quarter turns

COMPLETE?

COMPLETE?

COMPLETE?

I can use mathematical vocabulary to describe position, direction and movement including movement in a straight line

COMPLETE?

COMPLETE?

COMPLETE?

I can order and arrange combinations of mathematical objects in patterns and sequences

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can describe position, direction and movement including whole,  $\frac{1}{2}$ ,  $\frac{1}{4}$  and  $\frac{3}{4}$

COMPLETE?

COMPLETE?

COMPLETE?

I can express missing co-ordinates algebraically	COMPLETE?	COMPLETE?	COMPLETE?	YEAR 6 (Extension)
	COMPLETE?	COMPLETE?	COMPLETE?	
I can predict missing co-ordinates using the properties of shapes	COMPLETE?	COMPLETE?	COMPLETE?	YEAR 6
	COMPLETE?	COMPLETE?	COMPLETE?	
I can reflect simple shapes in the axes	COMPLETE?	COMPLETE?	COMPLETE?	YEAR 6
	COMPLETE?	COMPLETE?	COMPLETE?	
I can draw and translate simple shapes on a 4 quadrant grid	COMPLETE?	COMPLETE?	COMPLETE?	YEAR 6
	COMPLETE?	COMPLETE?	COMPLETE?	

# MATHS LADDER

## PLACE VALUE

YEAR 3

I can compare and order numbers up to 1000

COMPLETE?

COMPLETE?

COMPLETE?

I can read and write numbers up to 1000 in numerals and words

COMPLETE?

COMPLETE?

COMPLETE?

I can understand the value of each digit in a 3 digit number

COMPLETE?

COMPLETE?

COMPLETE?

I can count in tens from any number including crossing boundaries into hundreds

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 2

I can compare and order numbers from 0 up to 100 using  $>$   $<$  and  $=$  signs

COMPLETE?

COMPLETE?

COMPLETE?

I can understand the value of each digit in a 2 digit number

COMPLETE?

COMPLETE?

COMPLETE?

I can continue simple number sequences and shape patterns

COMPLETE?

COMPLETE?

COMPLETE?

I can identify odd and even numbers up to 20

COMPLETE?

COMPLETE?

COMPLETE?

I can identify one more/one less from a given number

COMPLETE?

COMPLETE?

COMPLETE?

YEAR 1

I can read and write numbers from 1 to 100 in numerals

COMPLETE?

COMPLETE?

COMPLETE?

I can read and write numbers from 1 to 20 in numerals and words

COMPLETE?

COMPLETE?

COMPLETE?

# MATHS LADDER

## PLACE VALUE

I can round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000		
COMPLETE?	COMPLETE?	COMPLETE?
I can read write order and compare numbers to 1 000 000 (1 million) and determine the value of each digit		
COMPLETE?	COMPLETE?	COMPLETE?
I can count backwards through zero to include negative numbers		
COMPLETE?	COMPLETE?	COMPLETE?
I can round any whole number to the nearest 10, 100 or 1000		
COMPLETE?	COMPLETE?	COMPLETE?
I can say 1000 more or less than any given number		
COMPLETE?	COMPLETE?	COMPLETE?
I can compare and order numbers beyond 1000		
COMPLETE?	COMPLETE?	COMPLETE?
I can represent numbers in different ways e.g. words, numerals, base 10, etc		
COMPLETE?	COMPLETE?	COMPLETE?
I can understand the value of each digit in a 4 digit number		
COMPLETE?	COMPLETE?	COMPLETE?
I can count in tens and hundreds and can add or subtract 10 or 100 from any given number up to 1000		
COMPLETE?	COMPLETE?	COMPLETE?

YEAR 5

YEAR 4

MATHS LADDER  
PLACE VALUE

YEAR 6	I can use negative numbers in context and calculate intervals across zero	COMPLETE?	COMPLETE?	COMPLETE?	
	I can round any whole number to a required degree of accuracy	COMPLETE?	COMPLETE?	COMPLETE?	
	I can read, write order and compare numbers up to 10,000,000 and determine the value of each digit	COMPLETE?	COMPLETE?	COMPLETE?	
	YEAR 5	I can interpret negative numbers in context	COMPLETE?	COMPLETE?	COMPLETE?
		I can count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000	COMPLETE?	COMPLETE?	COMPLETE?



MATHS LADDER  
NOTES

MATHS LADDER  
NOTES

MATHS LADDER  
NOTES

# LEARNING LADDERS

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