



Maths Parent Workshop

October 2026

Successful Learners Confident Individuals Responsible Citizens

What does Maths learning look like at Somers Heath?

Our curriculum is based on the National Curriculum.

We used various resource to support the delivery of the curriculum.

Lesson Structure:

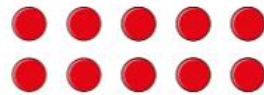
Starter	Rapid recall of mental maths facts (numberbonds/ multiplication facts) Address misconceptions from previous lesson Check understanding of a topic
Main Input	Teacher will model the learning for the lesson Introduce new content
Activity	Children apply the new learning to various problems (calculations as well as worded problems and problem solving)
Plenary	Review learning Address any misconceptions Provide further challenges linked to the main learning

Fluency

Students will be able to use their skills to know the best way to complete a calculation. It also means developing number sense and using those skills in a variety of contexts.

$$6 \times 2 =$$

Make this array.



Complete the sentences.

- a) There are counters in each row.
There are rows.
There are counters altogether.

Write $>$, $<$ or $=$ to make the statements true.

- a) 78×10 78×100
b) 100×56 65×100
c) 930×10 100×93

Reasoning

Reasoning in Maths is the ability to make logical links and connections, which help students tackle a new Maths problem. The skill of reasoning equips students not only with the ability to say how they will attempt to work out an answer, but why and how they can be sure it will work.

Reasoning is about using what you already know to help you deduce, reason or predict what will happen and the best way to go about facing a problem, with this knowledge in mind.

Mrs Hall owns a bookshop.

- In January, she sold 145 books.
- In February she sold 10 times as many books.
- In March she sold 10 times as many books as in February.

How many books did Mrs Hall sell in March?

Show your workings.

I know... so...

$$40 \div 4 = 10$$

$$32 \div 4 = 8$$

$$72 \div 4 = \boxed{}$$

$$76 \div 4 = \boxed{}$$

1b. Beau and Selina are working on the same calculation. They get different answers.

Beau

	2	2	4	
x		3	1	
			4	(1 x 4)
			2	(1 x 20)
			2	(1 x 200)
	1	2	0	(30 x 4)
	6	0	0	(30 x 20)
6	0	0	0	(30 x 200)
6	7	2	8	

Selina

	2	2	4	
x		3	1	
			4	(1 x 4)
		2	0	(1 x 20)
	2	0	0	(1 x 200)
	1	2	0	(30 x 4)
	6	0	0	(30 x 20)
6	0	0	0	(30 x 200)
6	9	4	4	

Who is correct?

Problem Solving

Problem-solving in Maths is the ability to make choices, interpret, formulate, model, investigate problems and communicate solutions effectively.

Problem-solving is about applying existing strategies to seek solutions and verify that answers are reasonable. Problem-Solving involves using the knowledge gained in understanding, along with the experience gained from Fluency and reasoning to formulate a strategy and solve the problem.

Long Multiplication (4-Digit by 2-Digit Numbers)

The amounts of money saved by five people have been ordered from smallest to greatest.



The computer at their bank malfunctioned, and each amount has been multiplied by a different 2-digit number between 10 and 60.

Here are the people reordered from smallest amount to greatest amount:



Investigate what the different 2-digit numbers could have been.

5a. Choose the digit cards that will complete this number sentence.

3	15	27	30	9
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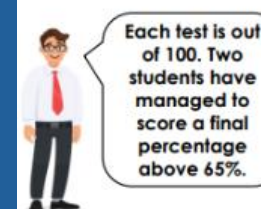
	÷	3	=	
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PS

2. Mr Payne has marked some tests and is trying to work out the final percentage scored by each student.

He says,



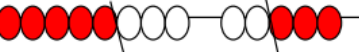
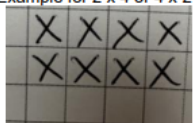
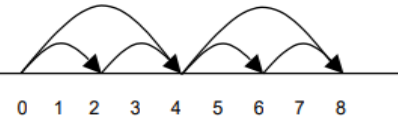
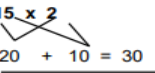
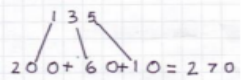
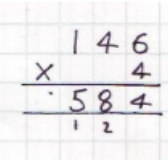
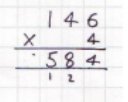
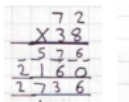
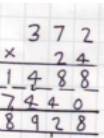
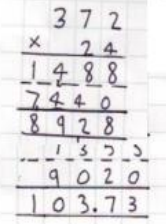
Student	Test A	Test B	Total marks from both tests	Final %
Tabitha	66%	$\frac{19}{25}$	$\frac{142}{200}$	
Erin	$\frac{2}{5}$	$\frac{17}{50}$	$\frac{74}{200}$	
Daniel	$\frac{1}{2}$	68%	$\frac{118}{200}$	
Jacob	58%	$\frac{6}{10}$	$\frac{118}{200}$	
Serenity	$\frac{12}{20}$	70%	$\frac{130}{200}$	
Michael				

Complete the table and investigate whether Mr Payne is correct.

Michael has managed to score a final percentage that is higher than Jacob, but lower than Serenity. Explore what his results could be.

Calculation Policy - Catalyst Academies Trust – YouTube

Example: Progression in multiplication from Year 1 to Year 6 – Spiral Curriculum

Multiplication Pictures and symbols There are 3 sweets in one bag. How many sweets are there in 5 bags?  (Recording on a number line modelled by the teacher when solving problems) Use of bead strings to model groups of.  Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher Arrays and repeated addition Example for 2×4 or 4×2  Calculation Policy Year 1 Multiplication using arrays Also through the use of pictures and hands on activities Grouping and sharing Introduce mathematical vocabulary of multiply and divide. Doubles up to 10 Children to learn number bonds Informal jottings only - no formal written methods at Year 1 Counting in 2s, 5s and 10s Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the	Multiplication x = signs and missing numbers $\begin{array}{l} 7 \times 2 = \square \\ 7 \times \square = 14 \\ \square \times 2 = 14 \\ \square \times \nabla = 14 \end{array} \quad \begin{array}{l} \square = 2 \times 7 \\ 14 = \square \times 7 \\ 14 = 2 \times \square \\ 14 = \square \times \nabla \end{array}$ Arrays and repeated addition  OR $2 + 2 + 2 + 2$ Calculation Policy Year 2 Multiplication using arrays Calculation Policy Year 2 Multiplication as repeated addition Calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals (=) signs. Show that multiplication of 2 numbers can be done in any order (commutative). Solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.  Doubling multiples of 5 up to 50 $15 \times 2 = 30$ Partition  $20 + 10 = 30$ Times table facts to be learnt: 3s, 4s, 6s and 8s.	Multiplication x = signs and missing numbers Continue using a range of equations as in Year 2 but with appropriate numbers. Number lines  Arrays and repeated addition Continue to understand multiplication as repeated addition and continue to use arrays (as in Year 2). Doubling multiples of 5 up to 50 $35 \times 2 = 70$ Doubling three digit numbers and multiples of 5, 10 and 100  Partition $35 \times 2 = 70$ $\begin{array}{r} 30 \times 2 = 60 \\ 5 \times 2 = 10 \\ \hline 60 \\ +10 \\ \hline 70 \end{array}$ Calculation Policy Year 3 Multiplication - Expanded Column Method Times table facts to be learnt: 7s, 9s and 12s.	Multiplication x = signs and missing numbers Continue using a range of equations as in Year 2 but with appropriate numbers Partition $23 \times 4 = 92$ $23 \times 4 = (20 \times 4) + (3 \times 4) = (80) + (12) = 92$ OR Pencil and paper procedures Extend to column method $\begin{array}{r} 324 \\ \times 7 \\ \hline 28 \\ 210 \\ \hline 2268 \end{array}$ $28 = 7 \times 4$ $140 = 7 \times 20$ $2100 = 7 \times 300$ <u>2268</u> Calculation Policy Year 4 Column Multiplication Multiply two-digit and three-digit numbers by a one-digit number using formal written layout  multiplying together 3 numbers Recall multiplication and division facts for multiplication tables up to 12×12	x = signs and missing numbers Continue using a range of equations as in Year 2 but with appropriate numbers Pencil and paper procedures Partition $47 \times 6 = 92$ $47 \times 6 = (40 \times 6) + (7 \times 6) = (240) + (42) = 282$ Column method (known as long multiplication) Calculation Policy Year 5 Column Multiplication    Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers By the end of Year 5 children should have progressed to working with simple decimals with one decimal place. Multiply whole numbers and those involving decimals by 10, 100 and 1,000 Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) Counting in 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s and 10s and in multiples of 10 Recall multiplication and division facts for multiplication tables up to 12×12 Extend to simple decimals with one decimal place. $\begin{array}{r} 12.5 \\ \times 2 \\ \hline 1.0 \\ 4.0 \\ \hline 25.0 \end{array}$ (2.0×0.5) (2.0×2.0) (2.0×10.0) Moving to formal methods of multiplication for decimals. Carrying numbers underneath.	Multiplication x = signs and missing numbers Doubling as in Year 5 with appropriate numbers and decimals Pencil and paper procedure 372×24 is approximately $400 \times 20 = 8000$ $372 \times 24 = 8,928$ Extend to decimals with up to two decimal places and different numbers of decimal places Column method (known as long multiplication)  $372 \times 24 = 8,928$ $4.51 \times 23 = 103.73$ Calculation Policy Year 6 Column Multiplication Extend to working with up to two decimal places and with numbers with a different number of decimal places. Count the decimal places and put the decimal point in after the calculation. E.g. $23 \times 451 = 10373$ 2.3×4.51 will have 3dp so 10.373 23×4.51 will have 2dp so 103.73 0.23×45.1 will have 3dp so 10.373 Counting in 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s and 10s and in multiples of 10, 0.1, 100, etc. BRACKETS & MULTIPLICATION – BODMAS Pupils explore the order of operations using brackets; for example, $2 + 1 \times 3 = 5$ and $(2 + 1) \times 3 = 9$.
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Calculation Policy – Years 1 to 6

Year 1			
Addition	Subtraction	Multiplication	Division
+= signs and missing numbers $3 + 4 = \square$ $\square + 4 =$ $3 + \square = 7$ $7 + 4 =$ $\square + 4 = 7$ $7 + \square =$ $\square + 7 =$ $7 + \square =$ Promoting covering up of operations and numbers. Number lines (numbered) 7 + 4 Recording by - drawing jumps on prepared lines constructing own lines (Teacher model jottings with missing numbers) <i>(Teachers model jottings appropriate for larger numbers)</i> Adding and subtracting time to be completed using a number line.	Ensure they understand the term 'difference'. Picture marks Sam spent 4p. What was his change from 10p? += signs and missing numbers $7 - 3 = \square$ $\square - 7 =$ $7 - \square = 4$ $4 - \square = 3$ $\square - 3 = 4$ $4 - \square =$ $\square - 7 = 4$ $\square - \square =$ Number lines (numbered) The difference between 7 and 11 (Counting up if the difference is between 1-20) Recording by - drawing jumps on prepared lines - constructing own lines (Teachers model jottings appropriate for larger numbers) Adding and subtracting time to be completed using a number line. Calculations with less than 2 place holders can be completed using column subtraction.	Pictures and symbols There are 3 sweets in one bag. How many sweets are there in 5 bags? <i>(Recording on a number line modeled by the teacher when solving problems)</i> Use of bead strings to model groups of. Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher Arrays and repeated addition Also through the use of pictures and hands on activities Grouping and sharing $4 \times 2 = 8$ Introduce mathematical vocabulary of multiply and divide Doubles up to 10 Children to learn number bonds Informal jottings only - no formal written methods at Year 1 Counting in 2s, 5s and 10s Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Times table facts to be learnt: 5x10s, and 11s.	Understand division as sharing and grouping Heads modelled through pictures, drawings and by using counters, etc. Solve one-step problems involving division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher Halving numbers: 10 to 20 Informal jottings only - no formal written methods at Year 1 Children to work through the school number bands scheme

Year 2

Addition

+= signs and missing numbers

Continue using a range of equations as in Year 1 but with appropriate, larger numbers.

Extend to
 $14 + 5 = 19$ and
 adding three numbers
 $20 + 2 + 10 = 32$ & $1 + 1 + 1 = 3$

Partition into tens and ones and recombine

$12 + 23 = 10 + 2 + 20 + 3$
 $= 30 + 5$
 $= 35$

refer to partitioning the second number only:

$23 + 12 = 23 + 10 + 2$
 $= 33 + 2$
 $= 35$

$23 \quad \quad \quad 33 \quad \quad \quad 35$

Add numbers including:

- o += two-digit number and 1s
- o += two-digit number and 10s
- o += two-digit numbers
- o adding 3 one-digit numbers

Show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another correct.

Recognise and use the inverse relationship between addition and subtraction and check calculations and solve missing number problems

Formal Written methods may be introduced for more able

Subtraction

-= signs and missing numbers

Continue using a range of equations as in Year 1 but with appropriate numbers.

Extend to $14 + 5 = 20$ $20 - 5 = 14$

Find a small difference by counting up

$42 - 30 = 3$

$39 \quad \quad \quad 40 \quad \quad \quad 42$

Formal Written methods may be introduced for differences more than 20

No exchange $\begin{array}{r} 57 \\ - 3 \\ \hline 54 \end{array}$ $78:14$
 $\begin{array}{r} 78 \\ - 26 \\ \hline 52 \end{array}$

With exchange

Adding and subtracting time to be completed using a number line.

Subtracting money with 9 pence (e.g. £1.00 or £20.00) to be completed on a number line. Calculations with less than 2 place holders can be completed using column subtraction.

Multiplication

x = signs and missing numbers

$7 \times 2 = 14$ $6 \times 2 = 12$
 $7 \times 10 = 70$ $14 \times 2 = 28$
 $2 \times 14 = 28$ $14 \times 2 = 28$
 $2 \times 14 = 28$ $14 \times 2 = 28$

Arrays and repeated addition

$4 \times 2 = 8$

$4 \times 2 = 4 + 4$
 $2 \times 4 = 4 + 4$
 or repeated addition
 $2 + 2 + 2 = 6$

Calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (x) division (÷) and equals (=) signs

Show that multiplication of 2 numbers can be done in any order (commutative)

Solve problems involving multiplication and mental materials, arrays, repeated addition, mental methods, multiplying by division and division problems in contexts.

$0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8$

Doubling multiplication of 5 up to 50

$15 \times 2 = 30$

Partition

$50 \div 2 = 25$
 $20 + 30 = 50$

Division

= signs and missing numbers

Solve problems involving division, using materials, repeated addition, mental methods, and division facts, including problems in contexts.

Understand division as sharing and grouping

$8 \div 2$ can be modelled as:

8 sweets can be shared between 2 people, how many does each have each?

$8 \div 2 = 4$ $10 \div 2 = 5$

Grouping

There are 5 sweets, how many people can have 2 each? (How many 2's make 10)

Halving even numbers up to 100 as

$10 \div 2 = 5$
 $100 \div 2 = 50$

Half of 24 is 12

Recall and use division facts for the 2, 5 and 10 multiplication tables, including grouping and even numbers. Children to complete through the number bond scribe numbers and to begin the times tables sheet.

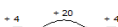
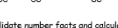
$20 \div 40 = 0.5$

Informal jotting used and formal written methods may be introduced towards the end of Year 2 where appropriate

Divisibility rules – understanding that multiples of 2 are even numbers and multiples of 10 are 0 and 10

Calculate mathematical statements for division within the multiplication tables and write them using the multiplication (x) division (÷) and equals (=) signs e.g. $6 \div 2 = 3$ $6 \div 2 = 3$ $6 \div 2 = 3$

Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another correct.

<u>Year 3</u>			
<u>Addition</u>		<u>Subtraction</u>	
<u>+ = signs and missing numbers</u>		<u>- = signs and missing numbers</u>	
Partition into tens and ones and recombine $\begin{array}{r} 30 + 3 \\ 50 + 2 \\ \hline 80 + 5 = 85 \end{array}$ (Begin to use numbers where the units exceed 10)		Continue using a range of equations as in Year 2 and with appropriate numbers. Find a small difference by counting up Continue as in Year 2 but with appropriate numbers e.g. $102 - 97 = 5$	
Add a near multiple of 10 to a two-digit number Continue as in Year 2 but with appropriate numbers, e.g. $35 + 10 = 45$ or the same as $36 + 20 = 1$		Subtract mentally a near multiple of 10 so or from a two-digit number Continue as in Year 2 but with appropriate numbers e.g. $78 - 49$ is the same as $78 - 50 + 1$	
Formal written methods introduced $83 + 24 = 105$		Pencil and paper procedures Consolidated addition $84 = 28$	
Children to work with HTU (3 digits)			
Children to begin to use formal written methods down the page. Addition sign on the left of the problem. Add numbers with up to 3 digits, using formal written methods of column addition			
Add numbers mentally, including: a three-digit number and 1s, a three-digit number and 10s, a three-digit number and 100s. Estimate answers and use inverse operations to check answers		Consolidate mental facts and calculation strategies from Year 3 $\begin{array}{r} 78-14 \\ -26 \\ \hline 58 \end{array} \quad \begin{array}{r} 289+1 \\ -55 \\ \hline 236 \end{array} \quad \begin{array}{r} 78-14 \\ -55 \\ \hline 668 \end{array}$	
Solve problems, including missing number problems, using number facts, place value, and more complex addition		Children to begin to use formal written methods down the page Subtraction sign on the left of the problem	
<u>+ = signs and missing numbers</u>		<u>Adding and subtracting time to be completed using a number line.</u>	
Continue using a range of equations as in Year 1 and 2 but with appropriate larger numbers.		Subtracting money with 0 2dp (e.g. £1.00 or £20.00) to be completed on a number line. Calculations with less than 2 place holders can be completed using column subtraction.	
Add fractions with the same denominator with one whole (For example, $\frac{5}{10} + \frac{1}{10} = \frac{6}{10}$)			

Year 4

Addition

+ signs and signs missing numbers

Informal (concrete / Mental methods continue)
 Continue to use the nearest multiple of 10 or 100, then adjust with appropriate numbers.
 e.g. $405 + 79$ is the same as $405 + 80 - 1$

$$\begin{array}{r} 350 \\ + 79 \\ \hline 429 \end{array}$$

Partition into tens and ones and recombine

Formal written methods

$$405 + 79 = 483$$

Leading to column addition:
 (Up to 4 digits by 3 digits)

Children to cross out the 'sensible' numbers until they are comfortable with the calculation

Addition to numbers with at least 4 digits: $555 + 675 = 1230$
 and add numbers with up to 4 digits using the formal written methods of column addition where appropriate

Children use formal written methods down the page, setting out calculation surely and working accurately. Addition sign on the left of the problem. Making sure you have the value correctly lined up by decimal place

Extend to decimals in the case of money.

Continue using a range of equations with appropriate larger numbers

Estimate and use inverse operation to check answers to a calculation

Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Add fractions with the same denominator within one whole (for example, $\frac{1}{2} + \frac{1}{2} = 1$)

Subtraction

- signs and signs missing numbers

Continue using a range of equations in Year 1 and 2 with appropriate numbers.

First calculation by counting up
 e.g. $5003 - 4999 = 7$

This can be modelled on an empty number line (see complementary evidence on page 10)

Subtract the nearest multiple of 10, then adjust.
 Continue as in Year 2 and 3 but with appropriate numbers.
 Use known number facts and place value to subtract

Pen and paper procedures

$$754 - 50 = 704$$

Continue to use the formal written methods of column subtraction where appropriate

Subtract numbers with up to 4 digits using the formal written methods of column subtraction where appropriate

Estimate and use inverse operations to check answers to a calculation

Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Children to cross out the 'sensible' numbers until they exchange from

Children to begin to use formal written methods down the page

(Subtraction sign always on the left of the problem)

Adding and subtracting time to be completed using a number line.

Subtracting money with 2 dp (e.g. £1.00 or £20.00) to be completed on a number line.

Calculations with less than 2 place holders can be completed using column subtraction.

Multiplication

x signs and signs missing numbers

Continue using a range of equations as in Year 1 and 2 with appropriate numbers

Partition
 $23 \times 4 = 92$
 $23 \times 4 = (20 \times 4) + (3 \times 4)$
 $= 80 + 12 = 92$

Continue to use the formal written methods of column multiplication where appropriate

Children to cross out the 'sensible' numbers until they exchange from

Children to begin to use formal written methods down the page

(Multiplication sign always on the left of the problem)

Recall multiplication and division facts for multiplication tables up to 12 x 12

Children to use formal written methods

Children begin to use the terms 'carry' and 'division box'

Disability rules – for the multiplication tables up to 12 x 12

Use place value, known and derived facts to divide mentally, including dividing by 5

Recognise and use factor pairs.

Division

÷ signs and signs missing numbers

Continue using a range of equations as in Year 1 and 2 with appropriate numbers

Partition and paper procedures
 $72 \div 5 = 14 \text{ r } 2$
 $50 \div 10 = 5$
 $10 \times 4 = 40$
 $12 \div 4 = 3$
 14 Groups of 2

Continue to use the formal written methods of column division where appropriate

Children to cross out the 'sensible' numbers until they exchange from

Children to begin to use formal written methods down the page

(Division sign always on the left of the problem)

Recall multiplication and division facts for multiplication tables up to 12 x 12

Children to use formal written methods

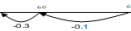
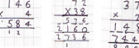
Children begin to use the terms 'carry' and 'division box'

Disability rules – for the multiplication tables up to 12 x 12

Use place value, known and derived facts to divide mentally, including dividing by 5

Recognise and use factor pairs.

Year 5

Addition	Subtraction	Multiplication	Division
= signs and missing numbers Formal written methods Add numbers with at least 4 digits $3587 + 675 = 4262$ (as for Year 4) and use formal written methods for calculating numbers HB, TB, TH, U Extend to decimals (same number of decimal places) and add and subtract numbers (with different numbers of digits) 12.490 $+11.725$ $\hline 24.215$ 12.490 -11.725 $\hline 0.765$ Adding zero to a 'place holder' Children confidently use formal written methods down the page, setting out calculation sums neatly and working accurately, checking their work by using the inverse operation. Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Solve addition multi-step problems in contexts, deciding which operations and methods to use and when. + and = signs and missing numbers Continue using a range of equations with appropriate larger numbers For example, $5 = 1 + 1 + 1 + 1 + 1$ $5 = 5 \times 1$ and for example, $2 = 8 \div 4$ Model negative numbers using a number line. Adding and subtracting how to be compared and ordered, and how to be added and subtracted can be completed using number lines. Subtracting money using a 10p coin and a 2p coin has to be considered $100 - 20 = 80$ and $80 - 20 = 60$ can be completed using simple subtraction.	= signs and missing numbers Consolidate number facts and calculation strategies from Year 4 = signs and missing numbers Continue using a range of equations as in Year 1 and 2 but with appropriate numbers Find a difference by counting up e.g. $3000 - 2000 = 1000$ Continuing in this way until the answer is found. This can be modelled on an empty number line (see complementary addition below) Subtract the nearest multiple of 10 or 100, then adjust. Continue in Years 3, 4 and 5 but with appropriate numbers Use known number facts and place value to subtract $0.1 - 0.4 = 0.7$  Use known number facts and place value to subtract e.g. $0.1 - 0.24 = 0.37$ Children to cross out the number which they exchange from Extend to decimals in the case of money  Subtract whole numbers with more than 4 digits, including using formal written methods (column subtraction) Subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy Subtracting multi-step problems in contexts, deciding which operations and methods to use and why.	= signs and missing numbers Continue using a range of equations as in Year 2 but with appropriate numbers Perfice and paper procedures Partition $47 \times 6 = 32$ $47 \times 6 = (40 \times 6) + (7 \times 6)$ $= (240 + 42)$ $= 282$ Column method (known or long multiplication)  Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers By the end of Year 5 children should have progressed to working with simple decimals with one decimal place Multiply whole numbers and those involving decimals by 10, 100 and 1,000 Recognize and use square numbers and cube numbers, and the notation for squared (2^2) and cubed (2^3) Counting in 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s and 10s and in multiples of 10 Recall multiplication and division facts for mental multiplication up to 12×12 Extend to simple decimals with one decimal place 12.5 $\times 2$ $\hline 25.0$ $\times 0.2$ $\hline 2.50$ $\times 0.02$ $\hline 0.25$ 25.0 $\times 2$ $\hline 50.0$ $\times 0.2$ $\hline 5.00$ $\times 0.02$ $\hline 0.50$ 25.0 $\times 2$ $\hline 50.0$ $\times 0.2$ $\hline 5.00$ $\times 0.02$ $\hline 0.50$	= signs and missing numbers Sharing and grouping Continue to understand division as both sharing and grouping (repeated addition) Halving numbers up to 1,000 including simple decimals e.g. As in Year 4 with larger numbers Shortcuts Remainders $7 \overline{) 7364}$ $10 \overline{) 7364}$ Remainders expressed as remainders: r3 Children to use formal written methods. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context Children use the terms 'carry' and 'divisor box' Remainders Quotients expressed as fractions or decimals: $12.45 \div 4 = 3.1125$ $4172 \div 8 = 521.5$ $280 \div 7$ lies between $210 \div 7 = 30$ and $280 \div 7 = 40$ $250 \div 2 = 125$ $70 \div 10 = 7$ $+140 = 20 \times 7$ $+42 = 6 \times 7$ $\hline 14$ 35 Groups 4 Answer: 30 remainder 4 Divisibility rules - for the multiplication tables up to 12 and 100 and 1,000 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000. Solve problems involving division, including dividing whole numbers and fractions and problems involving simple division.

Calculation Policy Guidance

Year 6

Addition	Subtraction	Multiplication	Division
+= signs and missing numbers Formal written methods Extend to decimals (with and without a different number of digits). Including adding zero as a place holder.	-= signs and missing numbers <u>Consolidate number facts and calculation strategies from Year 5</u>	x = signs and missing numbers Doubling as in Year 5 with appropriate numbers and decimals	= signs and missing numbers <u>Sharing and grouping</u> Continue to understand division as both sharing and grouping (repeated addition)
Partition into hundreds, tens and ones and decimal fractions and recombine Refine previous years to: $38.5 + 7.3 = 45.8$		<u>Pen and paper procedure</u> 372 x 24 is approximately $400 \times 20 = 8000$ $372 \times 24 = 8,928$	Having numbers up to 1,000 (including decimals) up to 2dp As in Year 5 with harder numbers Pen and Paper Procedures – including Decimals
Add the nearest multiple of 10, 100 or 1000, then adjust Continue as in earlier years, but with appropriate numbers, including extending to adding 1.6, 2.0 etc.	Pupils practise subtraction for larger numbers, using the formal written method of column subtraction. They undertake mental calculations with increasingly large numbers and more complex calculations.	Extend to decimals with up to two decimal places 	<u>Remainders</u> As in Year 5, expressed as fractions or decimals: $153 \div 4 = 38 \frac{1}{4}$ $1248 \div 4 = 312$
Use knowledge of the 4 operations to carry out calculations involving the 4 operations: <u>add, subtract, multiply, divide</u> (BODMAS/Brackets Orders Division Multiplication Addition Subtraction) Multiplication is done before addition, in the expression $2 + 3 \times 4$, the answer is 14. Brackets, may be used to avoid confusion. For example, $2 + (3 \times 4)$ will still precede without them. $3 \times (4 + 5) \times 3 + 2$	Decomposition with decimals up to 2dp including different numbers of decimal places. Work with numbers with up to 6 digits. $5346 - 29.65 = 5049.5$ $1.51 \times 23 = 107.3$ <u>Use known number facts and place value to subtract</u> E.g. $0.5 - 0.31 = 0.19$	<u>Column method</u> (including long multiplication) 	
Using the number line, add, positive and negative integers for measures such as temperature. Add fractions with different denominators and mixed numbers, using the concept of equivalent fractions	round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across 0	Extend to working with up to two decimal places and with numbers with a different number of decimal places Count the decimal places and put the decimal point in after the calculation. E.g. $23 \times 451 = 10373$ 2.3 x 451 = will have 3dp so 1037.3 2.3 x 451 = will have 2dp so 1037 0.23 x 451 = will have 5dp so 103.73	Divide numbers up to 4 digits by a two-digit whole number using the formal written method (long division method) and, interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context $226 \div 17 = 13 \text{ r } 5$
Use and understand the addition of different denominators by identifying equivalent fractions with the same denominator. Start with fractions with the denominator of one (e.g. 1/2) and progress to the other (for example, $\frac{1}{2} + \frac{1}{3}$) and multiply a variety of (increasingly complex) problems.	solve number and practical problems that involve $\frac{1}{2}$, $\frac{1}{3}$ of the above <u>Adding and subtracting time to be completed using a number line.</u>	Counting in 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s and 10s and in multiples of 10, 100, 1000, etc. <u>BODMAS & MULTIPLICATION – BODMAS</u> Pupils explore the order of operations using brackets, for example, $2 + 1 \times 3 = 5$ and $(2 + 1) \times 3 = 9$	<u>Answer: 15 remainder 1</u> Up to 4 by 'long' division with remainders, decimals and 'carrying' within the problem Simple money, metric problems involving 2 decimal places
Adding and subtracting time to be completed using a number line.	Adding and subtracting time to be completed using a number line.	Interpreting long division of 3 by 2-digit division Divisibility rules to be completed by tables up to 12 and 10, 25 and 100 times tables.	Interpreting long division of 3 by 2-digit division Divisibility rules to be completed by tables up to 12 and 10, 25 and 100 times tables.

Homework

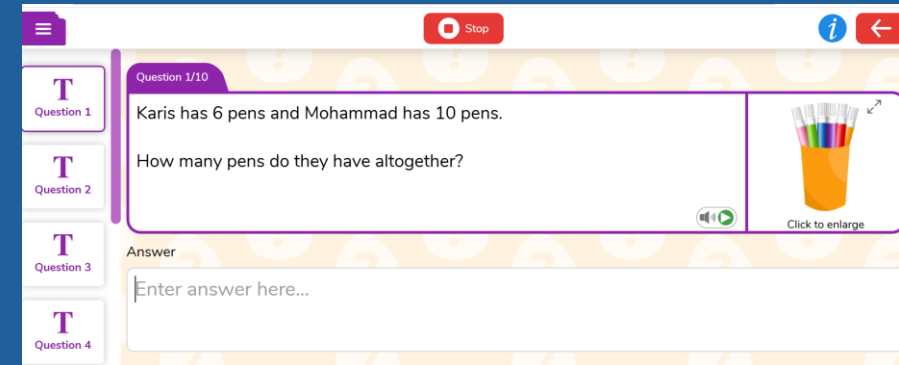
Purple Mash Y1 & 2

Mirodo – Y3 & 4

Sats Companion – Y5 & 6

Numbots – KS1

Times Tables Rock Stars – KS2



Sam wants to buy a car.



One car has a mileage of 5,400 miles. Another has a mileage that is 1,000 miles higher.

What is its mileage?

miles

