



Somerset Bridge Primary School

Aspire - Brave - Care - Collaborate

The four operations used for Maths at
Somerset Bridge Primary in Year 5.

Year 5

Addition

Adding numbers with more than 4 digits including decimals

Using place value charts are key to this as well as place value counters to help with the decimals.

Use 'regrouping' to describe rearranging a column.

Use the vocabulary of 'Addend, addend and sum.'

$$\begin{array}{c} 1 + 7 = 8 \\ \swarrow \quad \downarrow \quad \searrow \\ \text{addend} \quad \text{addend} \quad \text{sum} \end{array}$$

$$\begin{array}{r} \pounds 23.59 \\ + \pounds 7.55 \\ \hline \pounds 31.14 \end{array}$$

$$\begin{array}{r} 23481 \\ + 1362 \\ \hline 24843 \end{array}$$

$$\begin{array}{r} 19.01 \\ 3.65 \\ + 0.7 \\ \hline 23.36 \end{array}$$

Using the bar to find missing digits.

It is important for children to use the bar in this way to encourage the use of it to aid with problem solving.

This is not a form of getting the correct answer but helping to guide children to the correct operation.

MacDonalds sold £9957.68 worth of hamburgers and £1238.5 worth of chicken nuggets. How much money did they take altogether?

?	
£957.68	£1238.5

Subtraction

Subtract with at least four digit numbers including two decimal places.

Include money, measures and decimals ensuring that children do this practically before the abstract.

Subtract with decimal values, including mixtures of integers and decimals, aligning the decimal point.

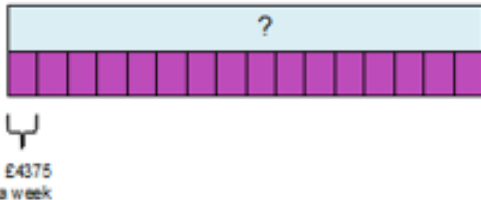
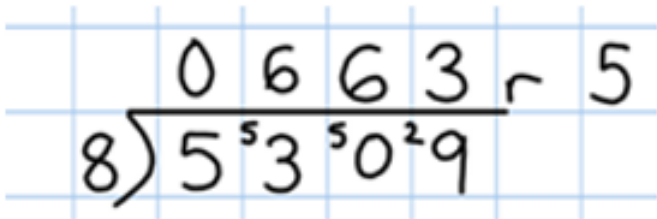
$$\begin{array}{r} \cancel{2}^1 \cancel{3}^{10} \cancel{0}^{10} \cancel{5}^8 \cancel{6}^1 \\ - 2128 \\ \hline 28928 \end{array}$$

Use 'regrouping'

$$\begin{array}{r} \cancel{7}^{10} \cancel{X}^{10} \cancel{6}^8 \cancel{X}^8 \cancel{0}^1 \\ - 372.5 \\ \hline 6796.5 \end{array}$$

Approximate
/Estimate,
Calculate,
Check.

<p>Use the vocabulary of 'Minuend, subtrahend and difference.'</p> $\begin{array}{c} 8 - 1 = 7 \\ \swarrow \quad \downarrow \quad \searrow \\ \text{minuend} \quad \text{subtrahend} \quad \text{difference} \end{array}$	
<p>Using the bar model or part part whole model to find missing digits.</p> <p><i>It is important for children to use the bar or part, part whole in this way to encourage the use of it to aid with problem solving.</i></p>	<div data-bbox="560 416 1158 618" data-label="Figure"> </div> <div data-bbox="1174 461 1350 618" data-label="Image"> </div> <p>A holiday to Lapland costs £5005 for a family of four, the <u>Smith's</u> have only saved £3787.75, how much money do they still need to find?</p>
<h2>Multiplication</h2>	
<p>Multiplying up to <u>four digit</u> numbers by two digits using long multiplication.</p> <p><i>Children need to be taught to approximate first, e.g. for 72×38, they will use rounding: 72×38 is approximately $70 \times 40 = 2800$, and use the approximation to check the reasonableness of their answer.</i></p> <p>Use the vocabulary of 'Factor, multiplier, multiplicand and product.'</p> $\begin{array}{c} 2 \times 4 = 8 \\ \swarrow \quad \downarrow \quad \searrow \\ \text{multiplier} \quad \text{multiplicand} \quad \text{product} \\ \text{factor} \quad \quad \text{factor} \quad \quad \text{product} \end{array}$	<div data-bbox="464 887 767 1178" data-label="Equation-Block"> $\begin{array}{r} 56 \\ \times 27 \\ \hline 392 \\ 1120 \\ \hline 1512 \end{array}$ <p style="margin-left: 150px;">(56x7) (56x20)</p> </div> <div data-bbox="1078 909 1342 1066" data-label="Image"> </div> <ul style="list-style-type: none"> - Explain that first we are multiplying the top number by 7 starting with the units/ones. (any carrying needs to be done underneath the numbers). - Now explain that we need to put a 0 underneath—explain that this is because we are multiplying the number by 20.. (2 tens) which is the same as <u>multiplying 10</u> and 2. - Now add the 2 numbers together to give you the answer. - This will need lots of modeling to show the children. <div data-bbox="472 1547 743 1727" data-label="Equation-Block"> $\begin{array}{r} 3652 \\ \times 8 \\ \hline 29216 \\ \hline \end{array}$ <p style="margin-left: 100px;">5 4 1</p> </div> <div data-bbox="879 1559 1182 1727" data-label="Equation-Block"> $\begin{array}{r} 1234 \\ \times 6 \\ \hline 7404 \\ \hline 12340 \\ \hline 19744 \end{array}$ <p style="margin-left: 150px;">(1234 x 6) (1234 x 10)</p> </div>

<p>Using the bar to support multiplication.</p>	<p>The cost to run a sports centre is £4375 a week, how much would it cost to run for 16 weeks?</p> 
<h2 style="text-align: center;">Division</h2>	
<p>Diving with up to <u>four digit</u> numbers by one digit including numbers where remainders are left.</p> <p><i>Use the vocabulary of 'Dividend, divisor and quotient.'</i></p> $ \begin{array}{c} 32 \div 4 = 8 \\ \swarrow \quad \downarrow \quad \searrow \\ \text{dividend} \quad \text{divisor} \quad \text{quotient} \end{array} $	 <p>Short division with remainders: Now that pupils are introduced to examples that give rise to remainder answers, division needs to have a <u>real life problem solving</u> context, where pupils consider the meaning of the remainder and <u>how</u> to express it, <u>ie.</u> as a fraction, a decimal, or as a rounded number or <u>value</u>, depending upon the context of the problem.</p>
<p>Using the bar to support division problems.</p>	<p><u>Bar Model to support understanding of problem solving:</u></p> <p>Frank has 4920 apples. He needs to put them into baskets of 40. How many baskets does he need?</p> 