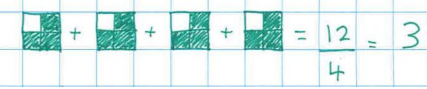


Examples of calculations - By year of introduction

Year of introduction	Addition	Subtraction	Multiplication	Division
Year 6	<p>I can add and subtract numbers up to 4 digits</p> <p><u>Column addition</u></p> $\begin{array}{r} 93076 \\ + 87348 \\ \hline 180424 \\ \hline 1 \quad 1 \quad 1 \end{array}$	<p>I can add and subtract numbers up to 4 digits</p> <p><u>Column subtraction</u></p> $\begin{array}{r} 3900.49 \\ - 248.88 \\ \hline 3651.61 \end{array}$	<p>I can multiply multi-digit numbers up to 4 digits by a two-digit number</p> <p><u>Multi-digit multiplication</u></p> $\begin{array}{r} 498.6 \\ \times 34 \\ \hline 19944 \\ 149580 \\ \hline 16952.4 \end{array}$	<p>I can divide numbers up to 4 digits by a two-digit whole number</p> <p><u>Division to get a decimal</u></p> $\begin{array}{r} 0369.25 \\ 8 \overline{)2954.00} \\ \underline{16} \\ 135 \\ \underline{112} \\ 234 \\ \underline{184} \\ 500 \\ \underline{400} \\ 1000 \\ \underline{800} \\ 2000 \\ \underline{1600} \\ 4000 \\ \underline{3200} \\ 8000 \\ \underline{7200} \\ 8000 \\ \underline{7200} \\ 8000 \\ \underline{7200} \\ 8000 \\ \underline{7200} \\ 8000 \end{array}$ <p><u>Long division</u></p> $\begin{array}{r} 0146 \\ 13 \overline{)1898} \\ \underline{13} \\ 59 \\ \underline{52} \\ 78 \\ \underline{78} \\ 0 \end{array}$
Year 5	<p>I can add and subtract numbers up to 4 digits</p> <p><u>Column addition</u></p> $\begin{array}{r} 93076 \\ + 87348 \\ \hline 180424 \\ \hline 1 \quad 1 \quad 1 \end{array}$	<p>I can add and subtract numbers up to 4 digits</p> <p><u>Column subtraction</u></p> $\begin{array}{r} 34009 \\ - 18734 \\ \hline 15275 \end{array}$	<p>I can multiply numbers up to 4 digits by a one or two digit number</p> <p><u>Multi digit multiplication</u></p> $\begin{array}{r} 876 \\ \times 74 \\ \hline 3504 \\ 61320 \\ \hline 64824 \end{array}$	<p>I can divide numbers up to 4 digits by a one-digit number</p> <p><u>Short division</u></p> $\begin{array}{r} 0376 \\ 6 \overline{)2256} \\ \underline{12} \\ 105 \\ \underline{12} \\ 856 \\ \underline{72} \\ 136 \\ \underline{12} \\ 16 \\ \underline{12} \\ 4 \end{array}$ <p><u>Multiplying Fractions</u></p> $\frac{3}{4} \times 4 =$  $12 = \frac{12}{4} = 3$

Year 4

I can add and subtract 4 digit numbers

I can solve measure and money problems involving fractions and decimals

Column addition

$$\begin{array}{r}
 4781 \\
 + 4946 \\
 \hline
 9727 \\
 11
 \end{array}$$

Adding decimals

$$\begin{array}{r}
 17.40 \\
 + 8.50 \\
 \hline
 25.90 \\
 1
 \end{array}$$

I can add and subtract 4 digit numbers using formal column addition where appropriate

Column subtraction

$$\begin{array}{r}
 612 \\
 7348 \\
 - 1674 \\
 \hline
 5674
 \end{array}$$

$$\begin{array}{r}
 3460 \\
 - 2270 \\
 \hline
 \$1190
 \end{array}$$

I can multiply two-digit and three-digit numbers by a one-digit number

3 by 1 digit multiplication

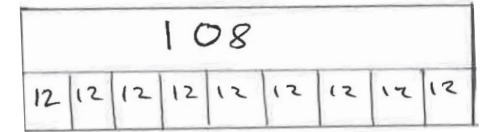
$$\begin{array}{r}
 634 \\
 \times 7 \\
 \hline
 4438 \\
 22
 \end{array}$$

Partitioned written multiplication

$$\begin{array}{r}
 379 \\
 \times 8 \\
 \hline
 72 \\
 560 \\
 2400 \\
 \hline
 3032 \\
 11
 \end{array}$$

I can divide using known facts

Dividing using a bar model



12 x 9 = 108

so

108 ÷ 12 = 9

Finding fractions of amounts using a bar model

2/5 of 30 =



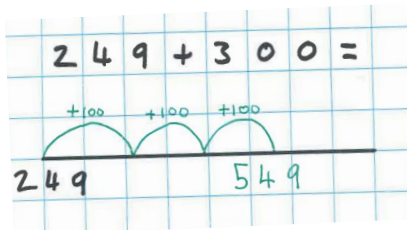
6 + 6 = 12

Year 3

I can add and subtract numbers with up to 3 digits using formal written methods

Column addition

$$\begin{array}{r}
 24 \\
 + 320 \\
 \hline
 344
 \end{array}$$



I can solve missing number problems for addition and subtraction

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

Column subtraction

$$\begin{array}{r}
 612 \\
 738 \\
 - 256 \\
 \hline
 482
 \end{array}$$

I can multiply and divide using the multiplication tables that I know (mental progressing to formal written methods)

Grid method multiplication

Numbers partitioned then multiplied. The parts are then added up to find the total

$$\begin{array}{|c|c|c|}
 \hline
 \times & 40 & 3 \\
 \hline
 8 & 320 & 24 \\
 \hline
 & 43 \\
 \times & 8 \\
 \hline
 & 24 \\
 \hline
 & 320 \\
 \hline
 & 344
 \end{array}$$

I can use my knowledge of times tables to divide

Using inverse to multiply and divide

$$\begin{array}{r}
 5 \times 6 = 30 \\
 \text{so} \\
 30 \div 5 = 6 \\
 30 \div 6 = 5
 \end{array}$$

Year 2

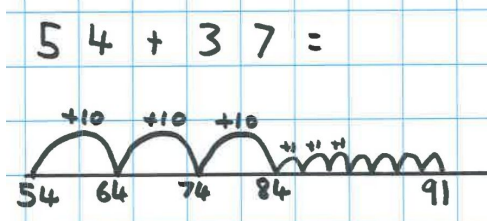
I can add and subtract numbers up to two digits.

Column addition

$$\begin{array}{r} 54 \\ + 37 \\ \hline 91 \\ \hline 1 \end{array}$$

Number line

Adding tens, then ones

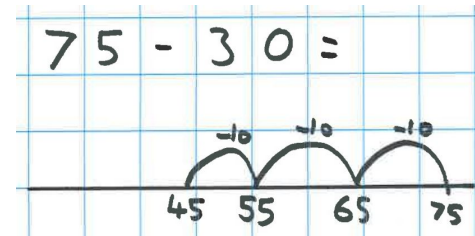


Partitioning then adding

$$\begin{array}{l} 54 + 37 = \\ 50 + 30 = 80 \\ 4 + 7 = 11 \\ 80 + 11 = \underline{91} \end{array}$$

I can recall all number bonds to 20 fluently e.g. $5+9=14$ and derive and use related facts up to 100

Number line



I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) sign

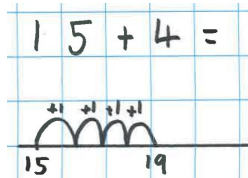
Using inverse to multiply and divide

$$\begin{array}{l} 5 \times 6 = 6 \times 5 \\ 5 \times 6 = 30 \\ \text{so} \\ 30 \div 5 = 6 \\ 30 \div 6 = 5 \end{array}$$

Year 1

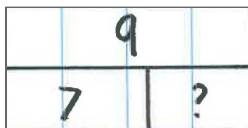
I can add and subtract 1 and 2 digit numbers up to 20 including 0

Number line



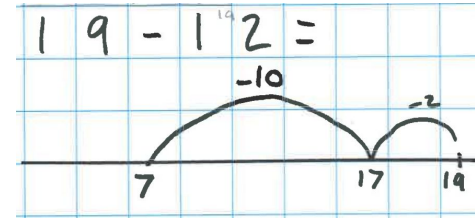
Part-part-whole model

Numbers can be moved to make different number sentences e.g. $7 + _ = 9$



I can add and subtract 1 and 2 digit numbers up to 20 including 0

Number line



I can solve one-step multiplication problems using pictures with the support of the teacher

Pictorial methods for groups and grouping

