

Addition	Subtraction	Multiplication	Division
<p><u>Mental methods</u> These should continue to develop, supported by a range of models and images learnt in previous years. Children should practise with increasingly large numbers to aid fluency</p> <p><u>Addition of numbers more than 4-digits using compact column addition</u> Using the same representations as Year 4, children will deepen their understanding of the compact column method and apply this knowledge to larger numbers.</p> <p><u>Addition of decimal numbers within the context of measure</u> When teaching measure, children will calculate with decimals using the compact column method where appropriate. Use representations from previous year groups to support understanding.</p>	<p><u>Mental methods</u> These should continue to develop, supported by a range of models and images learnt in previous years. Children should practise with increasingly large numbers to aid fluency</p> <p><u>Subtraction of numbers more than 4-digits using compact column subtraction</u> Using the same representations as Year 4, children will deepen their understanding of the compact column method and apply this knowledge to larger numbers.</p> <p><u>Subtraction of decimal numbers within the context of measure</u> When teaching measure, children will calculate with decimals using the compact column method where appropriate. Use representations from previous year groups to support understanding.</p>	<p><u>Mental methods</u> Mental methods X by 10, 100, 1000 using moving digits. Use practical resources and jottings to explore equivalent statements (e.g. $4 \times 35 = 2 \times 2 \times 35$). Solving practical problems where children need to scale up. Relate to known number facts. Identify factor pairs for numbers.</p> <p><u>Written methods (progressing to 4d x 2d)</u> Concrete Long multiplication using place value apparatus. Abstract Expanded long multiplication moving towards the compact method.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> $\begin{array}{r} 32 \\ \times 24 \\ \hline 8 \quad (4 \times 2) \\ 120 \quad (4 \times 30) \\ 40 \quad (20 \times 2) \\ \underline{600} \quad (20 \times 30) \\ 768 \end{array}$ </div> <div style="text-align: center;"> $\begin{array}{r} 38 \\ \times 27 \\ \hline 266 \quad (38 \times 7) \\ \underline{760} \quad (38 \times 20) \\ 1026 \end{array}$ </div> </div> <div style="text-align: center; margin-top: 10px;"> $\begin{array}{r} 87 \\ \times 25 \\ \hline 435 \\ \underline{1740} \\ 2175 \end{array}$ </div>	<p><u>Formal Written Methods</u> Children should progress in their use of written division calculations:</p> <ul style="list-style-type: none"> Using tables facts with which they are fluent Experiencing a logical progression in the numbers they use, for example: <ol style="list-style-type: none"> Dividend just over 10x the divisor when the divisor is a teen number, e.g. $173 \div 15$ (learning sensible strategies for calculations such as $102 \div 17$) Dividend over 100x the divisor, e.g. $840 \div 7$ Dividend over 20x the divisor, e.g. $168 \div 7$ <p>Remainders should be interpreted according to the context. (i.e. rounded up or down to relate to the answer to the problem).</p> <p><u>Short division (progressing to 4d by 1d)</u> Concrete Short division to be modelled for understanding using place value counters. Pictorial Draw place value counters in books to support solving Abstract</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> $\begin{array}{r} 930 \\ \div 3 \\ \hline 900 \quad 30 \end{array}$ </div> <div style="text-align: center;"> $\begin{array}{r} 30 + 3 = 10 \\ 900 + 3 = 300 \\ 930 + 3 = 310 \end{array}$ </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;"> $\begin{array}{r} 930 \\ \div 3 = \\ \hline 900 \quad 30 \end{array}$ </div> <div style="text-align: center;"> $\begin{array}{r} 3 \overline{) 930} \\ \underline{- 900} \quad \rightarrow 300 \\ 30 \\ \underline{- 30} \quad \rightarrow 10 \\ 0 \end{array}$ </div> </div>

$$\begin{array}{r} 144 \\ 4 \overline{)576} \\ \underline{-400} \\ 176 \\ \underline{-160} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

	1	2	3
5	6	¹ 1	¹ 5