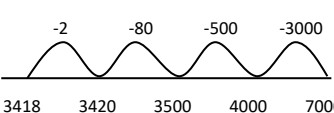


# Chaucer Junior School Calculation Policy—Addition and Subtraction

(based on the White Rose curriculum)

Year 3	<p>By the end of Year 3 children should be fluent in adding and subtracting 3 digit numbers using the column method:</p> $\begin{array}{r} 542 \\ + 387 \\ \hline 929 \\ 1 \end{array}$ $\begin{array}{r} 812 \\ 929 \\ - 542 \\ \hline 387 \end{array}$ <p>...including subtractions with 0 as a place holder, such as 507—451 and 406—289</p>	<p>Additionally, children are also expected to use knowledge of place value to quickly and mentally:</p> <p>HTO +/- ones (e.g. 315 + 3 or 315 + 3 ones)          HTO +/- tens (e.g. 315 + 30 or 315 + 3 tens)          HTO +/- hundreds (e.g. 315 + 300 or 315 + 3 hundreds)</p> <p>They will also know how 9—2 = 7 can help with:          90—20 and 900—200</p>
Year 4	<p>By the end of Year 4 children should be fluent with the column method with up to 4 digits, including multiple exchanges.</p> $\begin{array}{r} 5425 \\ + 3865 \\ \hline 9290 \\ 11 \end{array}$ $\begin{array}{r} 812814 \\ 9294 \\ - 5426 \\ \hline 3868 \end{array}$ <p>*Children are <u>not</u> expected to formally add with decimals (money) but can explore partitioning and recombining.</p>	<p>Additionally, children are also expected to begin to use <u>efficient</u> calculation methods.          E.g. 7000—3582:</p> <p>Inefficient                      Efficient                      Efficient</p> $\begin{array}{r} 69910 \\ 7000 \\ - 3582 \\ \hline 3418 \end{array}$ $\begin{array}{r} 6999 \\ - 3581 \\ \hline 3418 \end{array}$  <p>Children will also begin to use their knowledge of rounding to estimate answers and check their plausibility.</p>
Year 5	<p>By the end of Year 5 children should be fluent with the column method with more than 4 digits, including where the number of digits is mis-matched (e.g. 5 digit + 4 digit)</p> <p>These calculation skills should include decimals up to 3 decimal places (including money), and also where the number of decimal places are different.</p> $\begin{array}{r} 75425 \\ + 3865 \\ \hline 79290 \\ 11 \end{array}$ $\begin{array}{r} 81214 \\ 92947 \\ - 54263 \\ \hline 38784 \end{array}$ $\begin{array}{r} 17.06 \\ + 3.158 \\ \hline 20.218 \\ 11 \end{array}$	<p>Additionally, children should also be able to:</p> <ul style="list-style-type: none"> <li>• Use rounding to check the plausibility of their answers.</li> <li>• Understand 'inverse' and how to use it to check their answers.</li> <li>• Solve multi-step problems.</li> </ul>
Year 6	<p>By the end of Year 6 children should be fluent with the column method with up to 7 digits, and can confidently deal with numerous exchanges.</p> $\begin{array}{r} 7542573 \\ + 386552 \\ \hline 7929125 \\ 111 \end{array}$ $\begin{array}{r} 11 \\ 8121014 \\ 920476 \\ - 542635 \\ \hline 378841 \end{array}$ $\begin{array}{r} 17.06 \\ + 3.158 \\ \hline 20.218 \\ 11 \end{array}$	<p>Additionally, children should also be able to complete all of the above mentioned things in each previous year group.</p>

Along each step of the way, children should be able to use a variety of models and apparatus to demonstrate additions and subtractions, including the use of base 10, place value cards and bar model.