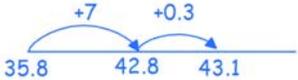
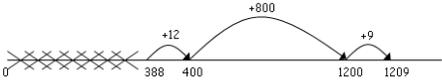
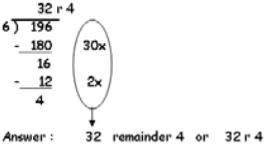


| | Addition | Subtraction | Multiplication | Division |
|----|---|--|---|--|
| Y5 | <p>Children should extend the carrying method to numbers with at least four digits.</p> $\begin{array}{r} 587 \\ + 475 \\ \hline 1062 \\ 11 \end{array}$ $\begin{array}{r} 3587 \\ + 675 \\ \hline 4262 \\ 111 \end{array}$ <p>Using similar methods, children will:</p> <ul style="list-style-type: none"> ✓ add several numbers with different numbers of digits; ✓ begin to add two or more decimal fractions with up to three digits and the same number of decimal places; ✓ know that decimal points should line up under each other, particularly when adding or subtracting mixed amounts, e.g. 3.2 m - 280 cm. <p>However, it is important that children do not feel that the compact method of recording a calculation is 'better' than using mental strategies, jottings or using a calculator. Children need to look at a calculation and decide what the most efficient and reliable approach is.</p>  | <p>Partitioning and decomposition</p> <p>Step 1 $754 = 700 + 50 + 4$ $- 286 = -200 + 80 + 6$</p> <p>Step 2 $700 + 40 + 14$ (adjust from T to U) $- 200 + 80 + 6$</p> <p>Step 3 $600 + 140 + 14$ (adjust from H to T) $- 200 + 80 + 6 = 468$</p> <p>This would be recorded by the children as</p> $\begin{array}{r} 600 + 140 + 14 \\ - 200 + 80 + 6 \\ \hline 400 + 60 + 8 = 468 \end{array}$ <p>Decomposition</p> $\begin{array}{r} 614 \\ - 286 \\ \hline 468 \end{array}$ <p>Children should:</p> <ul style="list-style-type: none"> ✓ be able to subtract numbers with more than four digits; ✓ begin to find the difference between two decimal fractions with up to three digits and the same number of decimal places; ✓ know that decimal points should line up under each other <p>Where the numbers are involved in the calculation are close together or near to multiples of 10, 100 etc counting on using a number line should be used.</p> <p>1209 - 388 = 821</p>  | <p>Multiply numbers up to four digits by a one or two digit number.</p> <p>Grid method HTU x U (Short multiplication - multiplication by a single digit) 346×9 Children will approximate first 346×9 is approximately $350 \times 10 = 3500$</p> $\begin{array}{r} \times \quad 300 \quad 40 \quad 6 \\ 9 \quad \boxed{2700} \quad \boxed{360} \quad \boxed{54} \\ \hline 2700 \\ + 360 \\ + 54 \\ \hline 3114 \\ 11 \end{array}$ <p>TU x TU (Long multiplication - multiplication by more than a single digit) 72×38 Children will approximate first 72×38 is approximately $70 \times 40 = 2800$</p> $\begin{array}{r} \times \quad 70 \quad 2 \\ 30 \quad \boxed{2100} \quad \boxed{60} \\ 8 \quad \boxed{560} \quad \boxed{16} \\ \hline 2100 \\ + 560 \\ + 60 \\ + 16 \\ \hline 2736 \\ 11 \end{array}$ <p>Using similar methods, they will be able to multiply decimals with one decimal place by a single digit number, approximating first. They should know that the decimal points line up under each other. e.g. 4.9×3 Children will approximate first 4.9×3 is approximately $5 \times 3 = 15$</p> $\begin{array}{r} \times \quad 4 \quad 0.9 \\ 3 \quad \boxed{12} \quad \boxed{2.7} \\ \hline 12 \\ + 2.7 \\ \hline 14.7 \end{array}$ <p>Recognise and use square and cube numbers, using the notation accurately.</p> | <p>Children will continue to use written methods to solve short division ThHTU ÷ U.</p> <p>Children can start to subtract larger multiples of the divisor, e.g. 30x</p> <p>Short division HTU ÷ U</p> <p>$196 \div 6$</p>  <p>Answer : 32 remainder 4 or 32 r 4</p> <p>Any remainders should be shown as integers, i.e. 14 remainder 2 or 14 r 2.</p> <p>Also, Short Division for More Able Children</p> $5 \overline{)1684}$ <p>Considering each column starting from the left.</p> <p>Children need to be able to decide what to do after division and round up or down accordingly. They should make sensible decisions about rounding up or down after division.</p> |

| | Addition | Subtraction | Multiplication | Division |
|--|----------|-------------|----------------|----------|
|--|----------|-------------|----------------|----------|

By the end of year 6, children will have a range of calculation methods, mental and written. Selection will depend upon the numbers involved.

Children should not be made to go onto the next stage if:

they are not ready.

they are not confident.

Children should be encouraged to approximate their answers before calculating.

Children should be encouraged to consider if a mental calculation would be appropriate before using written methods.