

	Addition	Subtraction	Multiplication	Division
<b>Yr 4</b>	<p>Expanded recap from Yr 3 including regroup</p> $  \begin{array}{r}  67 \\  +24 \\  \hline  91  \end{array}  \quad  \begin{array}{r}  267 \\  +85 \\  \hline  352  \end{array}  \quad  \begin{array}{r}  (7+4) \\  (60+20) \\  \hline  80  \end{array}  \quad  \begin{array}{r}  12 \\  (7+5) \\  \hline  16  \end{array}  $ <p>Moving on to short column addition with regroup.</p> <p>Carry below the line</p> $  \begin{array}{r}  625 \\  +48 \\  \hline  873  \end{array}  \quad  \begin{array}{r}  763 \\  +42 \\  \hline  805  \end{array}  \quad  \begin{array}{r}  367 \\  +85 \\  \hline  452  \end{array}  \quad  \begin{array}{r}  1 \\  1 \\  \hline  1  \end{array}  $ <p><b>Using similar methods children will:</b></p> <p>Add several numbers with different numbers of digits</p> <p>Begin to add two or more three-digit sums of money, with or without adjustment from the pence to the pounds</p> <p>Know that the decimal points should line up under each other, particularly when adding or subtracting mixed amounts, e.g. £3.59 + 78p</p> $  \begin{array}{r}  38 + 86 = 124 \\  +30 \\  \hline  86  \end{array}  \quad  \begin{array}{r}  +4 \\  +4 \\  \hline  120  \end{array}  \quad  \begin{array}{r}  +4 \\  +4 \\  \hline  124  \end{array}  $ <p><b>49+73 = 122</b></p> $  \begin{array}{r}  49 \\  +73 \\  \hline  122  \end{array}  $ <p>+50</p>	<p>Counting on from smaller number</p> $  \begin{array}{r}  102 - 89 = 13 \\  +1 \\  \hline  89  \end{array}  \quad  \begin{array}{r}  +10 \\  +2 \\  \hline  90  \end{array}  \quad  \begin{array}{r}  +1 \\  +10 \\  \hline  90  \end{array}  \quad  \begin{array}{r}  1 + 10 + 2 = 13 \\  +2 \\  \hline  102  \end{array}  $ <p>132 - 19 = 113</p> $  \begin{array}{r}  132 \\  -19 \\  \hline  113  \end{array}  \quad  \begin{array}{r}  -20 \\  +1 \\  \hline  112  \end{array}  $ <p><b>Regrouping 2 digit subtract 2 digit moving on to 3 digit subtract 2 digit numbers</b></p> $  \begin{array}{r}  94 \\  -76 \\  \hline  18  \end{array}  \quad  \begin{array}{r}  -754 \\  -86 \\  \hline  668  \end{array}  $ <p>Step 1</p> $  \begin{array}{r}  700 \\  +50 \\  \hline  80  \end{array}  \quad  \begin{array}{r}  +4 \\  +4 \\  \hline  120  \end{array}  \quad  \begin{array}{r}  +4 \\  +4 \\  \hline  124  \end{array}  $ <p>Step 2</p> $  \begin{array}{r}  700 \\  +40 \\  \hline  80  \end{array}  \quad  \begin{array}{r}  +14 \\  +14 \\  \hline  6  \end{array}  $ <p>Step 3</p> $  \begin{array}{r}  600 \\  +140 \\  \hline  80  \end{array}  \quad  \begin{array}{r}  +14 \\  +14 \\  \hline  6  \end{array}  $ <p>This would be recorded by the children as</p> $  \begin{array}{r}  73 \\  -1 \\  \hline  122  \end{array}  \quad  \begin{array}{r}  700 \\  +50 \\  \hline  600  \end{array}  \quad  \begin{array}{r}  +4 \\  +6 \\  \hline  668  \end{array}  $ <p><b>Part whole model</b></p> $  \begin{array}{c}  42 \\  \diagdown \quad \diagup \\  2 \quad 20 \\  \diagup \quad \diagdown \\  40 \quad 3  \end{array}  $ <p><b>40 + 20 + 2 + 3 = 65</b></p>	<p><b>Informal method</b></p> <p>Grid method</p> <p>TO X O (short multiplication - multiplication by a single digit)</p> <p>23 X 8</p> $  \begin{array}{r}  X \quad 20 \quad 3 \\  8 \quad 160 \quad 24  \end{array}  $ <p>Moving on to HTO X O</p> <p>146 X 4</p> $  \begin{array}{r}  X \quad 100 \quad 40 \quad 6 \\  4 \quad 400 \quad 160 \quad 24  \end{array}  $ <p>Or using X table knowledge</p> <p>160      8 X 2 = 16 so X 24      8 X 20 = 160</p> <p><b>Formal method 2 digit X 1 digit</b></p> $  \begin{array}{r}  23 \\  \times 4 \\  \hline  92  \end{array}  \quad  \begin{array}{r}  23 \\  \times 12 \\  \hline  28  \end{array}  \quad  \begin{array}{r}  23 \\  \times 4 \\  \hline  92  \end{array}  $ <p>Leading to subtract other multiples.</p> <p><b>Also using what I know cheat sheet...</b></p> <p>Eg 1 x 6 = 6</p> $  \begin{array}{r}  2 \times 6 = 12 \\  4 \times 6 = 24 \\  5 \times 6 = 30 \\  8 \times 6 = 48 \\  10 \times 6 = 60  \end{array}  $	<p>Discuss repeated subtraction</p> <p>Bar model division</p> <p>16 ÷ 4</p> $  \begin{array}{r}  16 \\  \hline  4 \quad 4 \quad 4 \quad 4  \end{array}  $ <p>Then onto the vertical method:</p> <p>Short Division TO + 0</p> <p>72 ÷ 3</p> $  \begin{array}{r}  24 \\  3 \overline{)72} \\  -3 \\  \hline  4 \\  -3 \\  \hline  1  \end{array}  \quad  \begin{array}{r}  30 \\  42 \\  -30 \\  \hline  12 \\  -12 \\  \hline  0  \end{array}  $ <p>(10 X 3) (10 X 3) (2 X 3) (2 X 3)</p> <p>Use cheat sheet</p> <p>Any remainders should be shown as integers e.g. 14 remainder 2 or 14 r2</p> <p>Children should make sensible decisions about rounding up or down after division especially in the context word problems.</p> <p>10 X 6 = 60</p>