|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Addition To be taught alongside each other Subtraction | | Multiplication To be taught alongside each other Division | |
| Y6  Y7 | *Children should:*   * *add several numbers with different numbers of digits;* * *begin to add two or more decimal fractions with up to four digits and either one or two decimal places;* * *know that decimal points should line up under each other, particularly when adding or subtracting mixed amounts, e.g. 401.2 + 26.85 + 0.71.*   C:\Users\Sal\Videos\FlipShare Data\Videos\VID00391.jpg  C:\Users\Sal\Videos\FlipShare Data\Videos\VID00365.jpg C:\Users\Sal\Videos\FlipShare Data\Videos\VID00369.jpg C:\Users\Sal\Videos\FlipShare Data\Videos\VID00367.jpg  Encourage self checking by writing the **inverse** calculation **below** the sum to check **immediately**.  C:\Users\Sal\Videos\FlipShare Data\Videos\VID00391.jpg C:\Users\Sal\Videos\FlipShare Data\Videos\VID00367.jpg  7 16   |  | | --- | | 8 10 12 14  9 1 3 4  - 1 4 8 6  7 6 4 8 |   686.56  - 637.06  049.50 | *Children should:*   * *be able to subtract numbers with different numbers of digits;* * *be able to subtract two or more decimal fractions with up to three digits and either one or two decimal places;* * *know that decimal points should line up under each other.*   **Number lines** ‘Find the difference by counting up’  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. E.g. 3002 – 1997 = 1005    **Partitioning leading to decomposition (See Y5) Only when fully secure in using number lines.**  C:\Users\Sal\Videos\FlipShare Data\Videos\VID00401.jpg C:\Users\Sal\Videos\FlipShare Data\Videos\VID00402.jpg  **Decomposition (only when secure in using expanded form)**  5 1316 5000 1300 160  6467 6000 400 60 7  -2684 - 2000 600 80 4  3783 3000 700 80 3  3783  2684 +  1 1  6467 Self check using **inverse.**      **Negative Column Subtraction** (optional) | Short multiplication (by a single digit) – Grid method, Expanded and contracted method (3 and 4 digit x 1 and 2 digit numbers)  **4346 x 8**        Children will approximate first.  **372 x 24 is approximately 400 x 25 = 10000**    *Using similar methods, they will be able to multiply decimals with up to two decimal places by a single digit number and then two digit numbers, approximating first. They should know that the decimal points line up under each other.*  **4.92 x 3 is approximately 5 x 3 = 15**   |  | | --- | | **12** | | **2.7** | | **+0.06** | | **14.76** |     **Both Expanded and Contracted methods to be used** only **when children are confident with the Grid method.**  More able children who are confident in all methods encouraged to use alternative methods such as the Lattice method. **(ECC)**  BODMAS- (brackets over division, multiplication, addition, subtraction) | Children will continue to use written methods to solve short division (division by a single digit)  C:\Users\Sal\Videos\FlipShare Data\Videos\VID00412.jpg C:\Users\Sal\Videos\FlipShare Data\Videos\VID00411.jpg  Solve divisions with 3 and 4 digit numbers ÷ 1 and 2 digit numbers.  Continue to use informal jottings on an empty number line to show chunking. E.g. 972 ÷ 36 = 27 36 x 27 = 972  36 x 20 = 720 36 x 5 = 180 36 x 2 = 72  **Long division** (3 digit ÷ 2 digit)    Any remainders should be shown as fractions, i.e. if the children were dividing 32 by 10, the answer should be shown as 3 2/10 which could then be written as 3 1/5 in it’s lowest terms.  Extend to decimals with up to two decimal places. Children should know that decimal points line up under each other.      **ECC** children to be secure with finding fractions using division methods.  BODMAS- (brackets over division, multiplication, addition, subtraction) |