Year 5			
Addition	Subtraction	Multiplication	Division
Children continue to build on their knowledge of the compact addition method extending to numbers of four digits or more and more than two values. This will also include decimals. If adding a mixture of 1 and 2 decimal places, teach children to put a zero in the hundredth column to avoid confusion and to enable better development of decimal place value: 23.49 7.81+ 30.30 _{1 1 1} Teach how the 0 only needs to be recorded when dealing with money, not straightforward decimals as it has no value. Model as 9 hundredths add 1 hundredth gives 10 hundredths. Record the unit and carry over the ten to the next column placing it under the answer line. Children should be able to align integers and decimals accurately. 19.01 3.65 0.70 + 23.36 _{1 1} As shown above, teach children to fill empty decimal places with zero to show the place value clearly.	Children still not secure with number facts and place value will need to remain on the partitioned column method as taught in years 3 and 4 until ready for the compact method. Extend use of compact method to numbers beyond 4 digits with 'exchanging': _{2 10 1 4 1} 31056 2128- 28928 Move to subtracting decimal values including calculations which have a mixture of integers and decimals. They should begin by aligning around the decimal point to ensure accurate alignment to begin with and as with addition, zero should be entered in any empty decimal places to ensure children know what to subtract in that column. _{6 10 1 8 1} 7169.0 372.5 - 6796.5 This formal written method should be in addition to using mental subtraction strategies including rounding and adjusting, blank number lines, deciding whether to count on or back, etc. It is necessary for children to decide when the compact column method is appropriate or when mental methods are more efficient:	Introduce the column method (short multiplication). Initially compare the same calculation e.g. 327x4 to see how the two methods are related, but ensure they can see why the short multiplication method has less steps and is therefore the more efficient of the two: **GRID METHOD** | x	300	20	7
4	1200	80	28 | 1200 80 28+ 1308 _{1 2} **SHORT MULTIPLICATION METHOD** 327 4 x 1308 _{1 2} *Encourage children to approximate to check the likelihood of their answer being accurate; 300x4 is 1200 so the answer shouldn't be too much bigger than this.* Once confident, children should be taught the long multiplication method. The grid method should only be used as a teaching tool to show children the relationship between the place value of the digits. They should not use the grid method themselves when multiplying larger integers as the aim is to have a more **efficient** method:	Children should begin to extend their use of short division to dividing four digit numbers by single digit numbers. Pupils should be introduced to more calculations which have remainders in the answers. They should then be put in to real life contexts so children have to consider the meaning of the remainder and how to express it; as a fraction, a decimal, or rounded up or down to the next whole number, depending on the context of the problem. 0 6 6 3 r5 _{5 5 2} 8	5 3 0 9 This calculation could be expressed as 663 remainder 5, 663 and five eighths, or rounded to either 663 or 664. *Encourage the use of the inverse through short multiplication to check answers so that they are using multiplication and division side by side.* **For more able, the long division method could be introduced-see Year 6 guidelines for how to teach this.** *Use inverses to check so that children continue to see the link between multiplication and division.*