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| Year 6ES | End of year expectations for mental calculation | End of year expectations for written methods and problem solving | Written strategies/ recordings/methods/images | Vocabulary& Links |
| * Perform mental calculations, including with mixed operations and large numbers.
* Use estimation to check answers to calculations and determine, in the context of a problem, an

 appropriate degree of  accuracy.*Pupils undertake mental calculations with increasingly large numbers and more complex calculations.*Pupils will draw on basic, Mental subtraction Strategies, (See Year 5.)Pupils will use, or visualise, representation of choice.Refer back to physical representations as required. | * Add and subtract numbers with more than 4-digits, including formal written methods (column addition and subtraction)
* Solve problems including the calculation and conversions of measure, using decimal notation of up to three decimal places
* Move towards consolidation of formal, columnar method.
* For more complex calculations, with increasingly larger or smaller numbers, compare representations and

 expanded algorithms  alongside column methods. Ask: What is the same? What’s different?* Compare and discuss the suitability of different methods, (mental or written), in context.
* Revert to expanded methods whenever difficulties arise

**Fractions**Add and subtract fractions with different denominators and mixed numbers.They practise calculations with simple fractions and decimal fraction equivalents to aid fluency. | Consolidate column methods, paying particular attention to the occurrence of zeros as place holders. | Use knowledge of the order of operations to carry out calculations involving the four operations (BIDMAS/BODMAS)Solve problems involving all four operationsAlgebra: use symbols and letters to represent variable and unknowns e.g. a + b = b + aUsing the number line, pupils use, add and subtract positive and negative integers for measures such astemperature. |