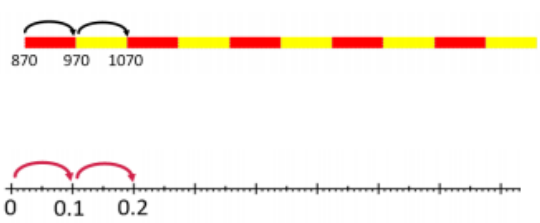
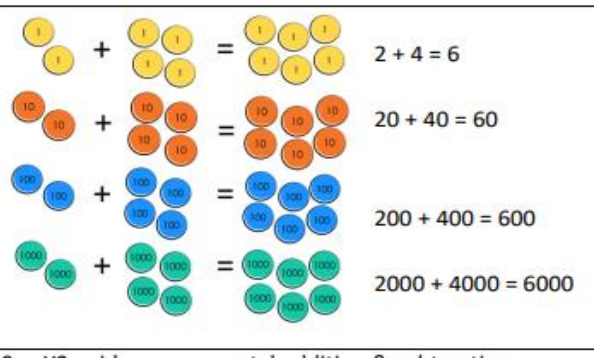
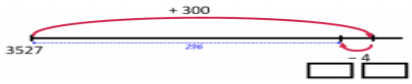
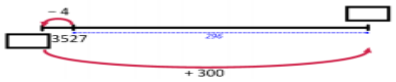
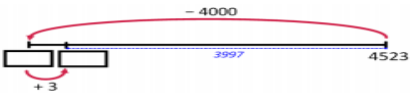
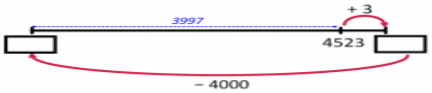
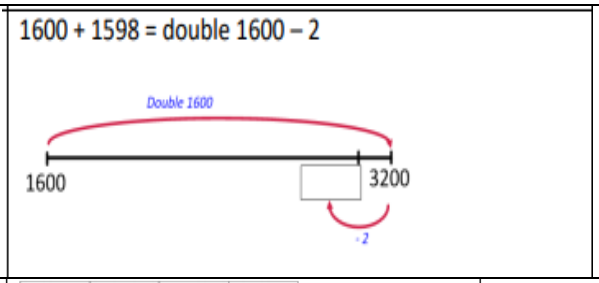
Year 4 Addition & Subtraction

Strategy and Guidance	CPA
Count forwards and backwards in steps of 10, 100 and 1000 for any number up to 10 000. Pupils should count on and back in steps of ten, one hundred and one thousand from different starting points. These should be practised regularly, ensuring that boundaries where more than one digit changes are included. Count forwards and backwards in tenths and hundredths	 Pay particular attention to boundaries where regrouping happens more than once and so more than one digit changes. E.g. 990 + 10 or 19.9 + 0.1
Using known facts and knowledge of place value to derive facts. Add and subtract multiples of 10, 100 and 1000 mentally Pupils extend this knowledge to mentally adding and subtracting multiples of 10, 100 and 1000. Counting in different multiples of 10, 100 and 1000 should be incorporated into transition activities and practised regularly	
<u>Adding and subtracting by partitioning one number and applying known facts.</u> By Year 4 pupils are confident in their place value knowledge and are calculating mentally both with calculations that do not require regrouping and with those that do.	See Y3 guidance on mental addition & subtraction, remembering that use of concrete manipulatives and images in both teaching and reasoning activities will help to secure understanding and develop mastery.
<u>Round and adjust Pupils should recognise that this strategy is useful when adding and subtracting near multiples of ten.</u> They should apply their knowledge of rounding. It is very easy to be confused about how to adjust and so visual representations and logical reasoning are essential to success with this strategy. Build flexibility by completing the same calculation in a different order.	3527 + 296 = 3827 - 4  Completing the same calculation but adjusting first: 3527 + 296 = 3523 + 300  4523 – 3997 = 523 + 3  Completing the same calculation but adjusting first: 4523 – 3997 = 4526 - 4000 

Year 4 Addition & Subtraction

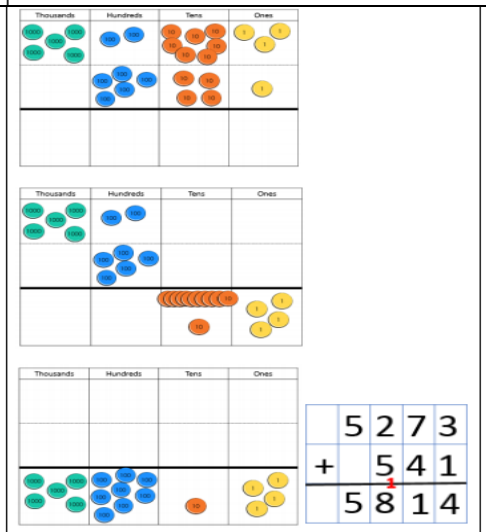
Near doubles

Pupils should be able to double numbers up to 100 and use this to derive doubles for multiples of ten. These facts can be adjusted to calculate near doubles.



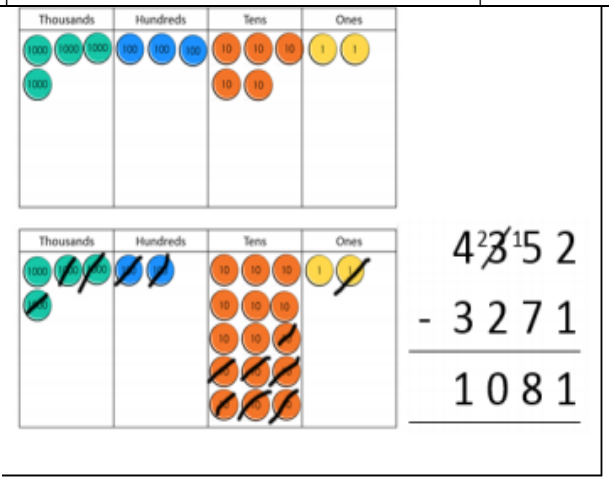
Written column methods for addition

Place value counters are a useful manipulative for representing the steps of the formal written method. These should be used alongside the written layout to ensure conceptual understanding and as a tool for explaining. This method and the language to use are best understood through the tutorial videos found here on the toolkit.



Written column methods for subtraction

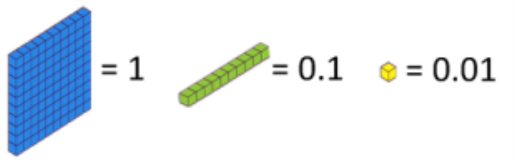
Place value counters are a useful manipulative for representing the steps of the formal written method. These should be used alongside the written layout to ensure conceptual understanding and as a tool for explaining. This method and the language to use are best understood through the tutorial videos on the toolkit.



Year 4 Addition & Subtraction

Calculating with decimal numbers

Assign different values to Dienes equipment. If a Dienes 100 block has the value of 1, then a tens rod has a value of 0.1 and a ones cube has a value of 0.01. These can then be used to build a conceptual understanding of the relationship between these. Place value counters are another useful manipulative for representing decimal numbers. All of the calculation strategies for integers (whole numbers) can be used to calculate with decimal numbers.



24.2 + 13.4 =