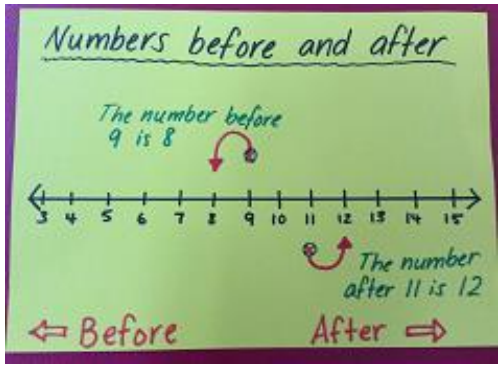
Turner School

Mental Computation and Problem Solving Strategies

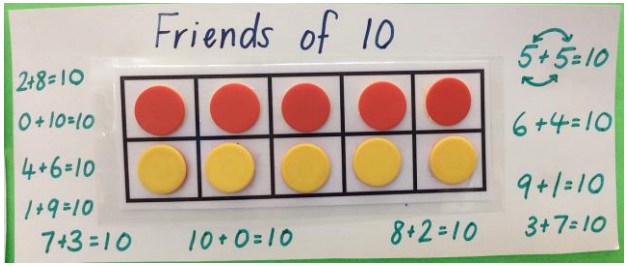
Number Before and After

Locating a number that comes before or after instantly (without having to count up from 1 first).



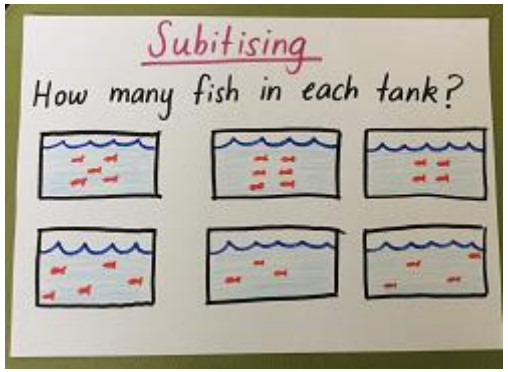
Friends of 10

Instant recall of all the different ways that you can make 10.



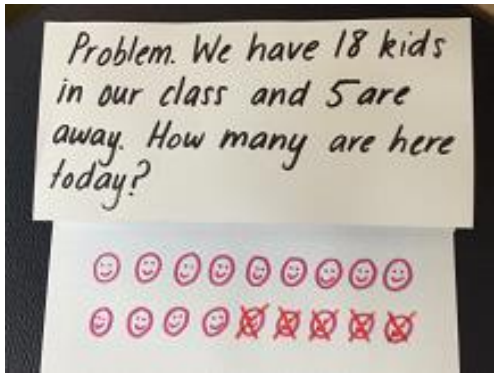
Subitising

Instant recognition of dot patterns (Regular patterns such as patterns on a dice and irregular patterns).



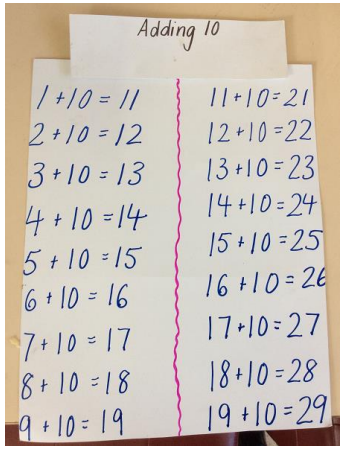
Drawing Pictures

The use of drawings to help solve problems.



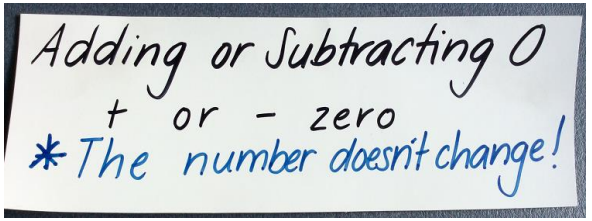
Adding or Subtracting 10

Using a strong understanding of place value (particularly, the meaning of the 'tens' column) to efficiently add or subtract 10 from any number.



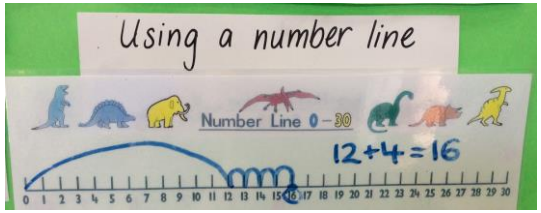
Adding or Subtracting Zero

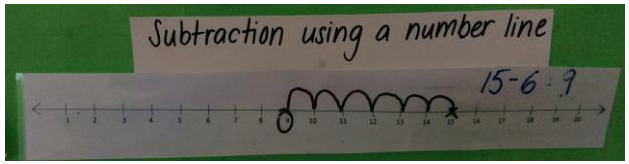
Recognising that when adding or subtracting 0, the number does not change.

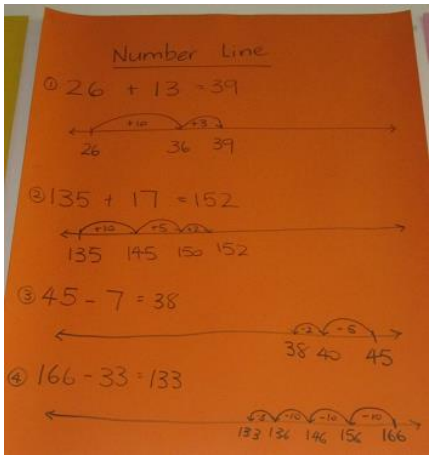


Using a Number Line (Addition and Subtraction)

Using a number line to assist with addition and subtraction.







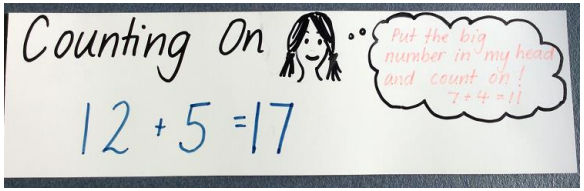
Using an 'open' number line where the numbers are not defined assists with higher numbers.

Using a Hundreds Chart

Using a hundreds chart to assist with finding relationships between numbers, counting patterns, addition and subtraction.

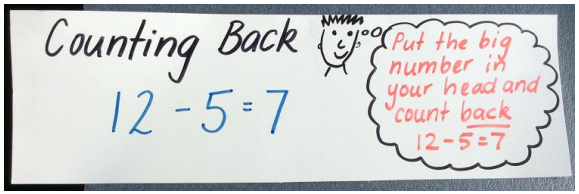
Counting On (Addition)

Put the bigger number in your head and then 'count on' using the smaller number (can use your fingers to 'count on').



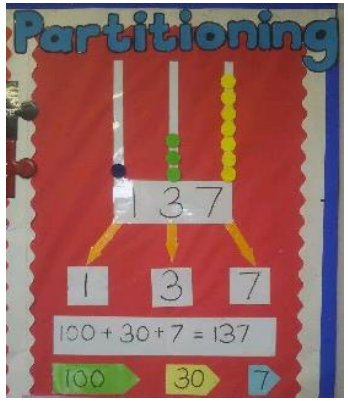
Counting Back (Subtraction)

Put the bigger number in your head and then 'count back' using the smaller number (can use your fingers to 'count back').



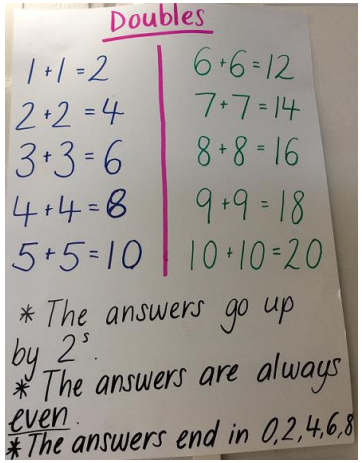
Partitioning

Using knowledge of place value to break numbers up (eg. into hundreds, tens and ones) to add or subtract.



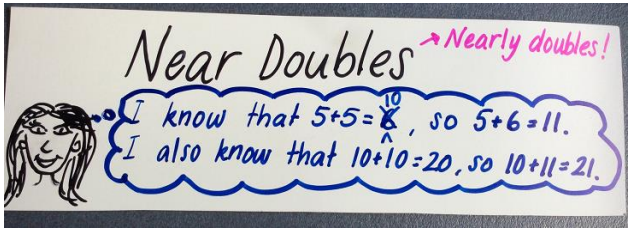
Doubles

Instant recall of double facts.



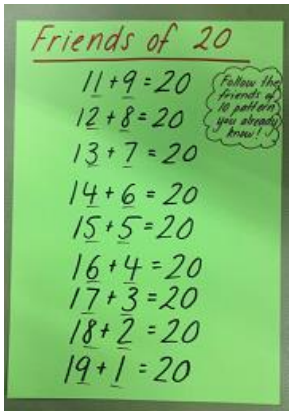
Near Doubles

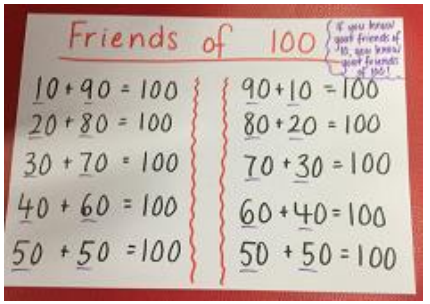
Once instant recall of double facts has been mastered, near doubles can be explored (knowing that 8+8=16, so 8+9=17).



Friends of 20/100

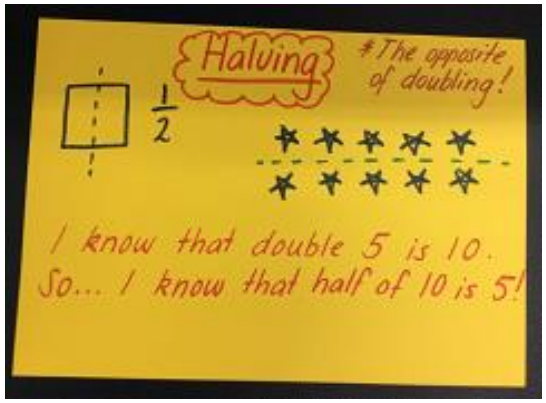
Building on knowledge of friends of 10, students can develop instant recognition of number facts to 20 or to 100.





Halving

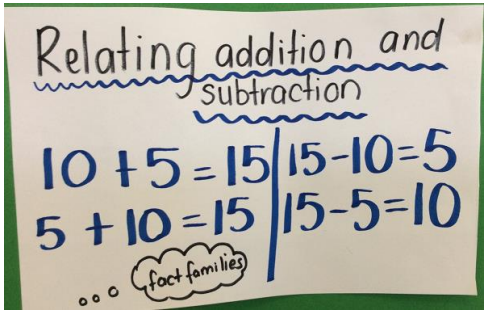
Linking knowledge of doubling to foster knowledge of halving.



Commutative Property

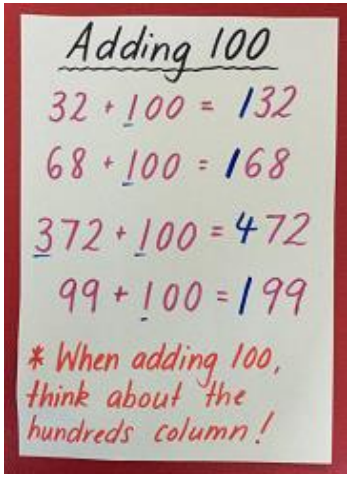
(Related Addition and Subtraction)

Understanding that if you know that 70+30=100, then you also know that 30+70=100, 100-70=30, 100-30=70. Knowing one fact can help you be more flexible and apply it to other problems.



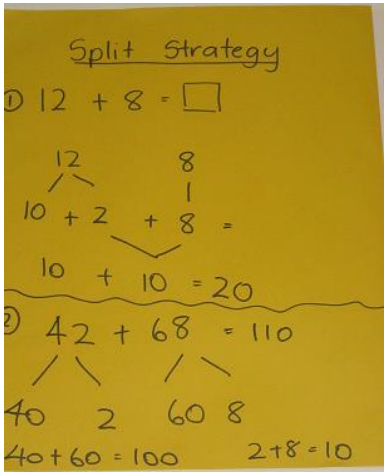
Adding or Subtracting 100

Using a strong understanding of place value (particularly, the meaning of the 'hundreds' column) to efficiently add or subtract 100 from any number.



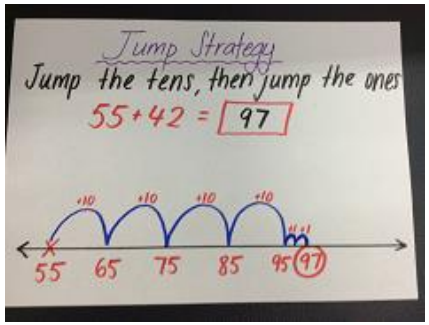
Split Strategy

'Splitting' numbers into smaller or more friendly numbers.



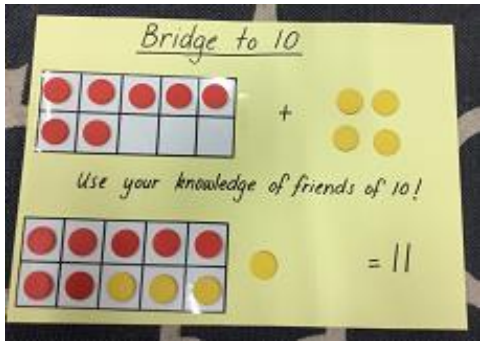
Jump Strategy

Using a number line to 'jump' numbers (forward for addition, backward for subtraction). First you jump the tens and then you jump the ones.



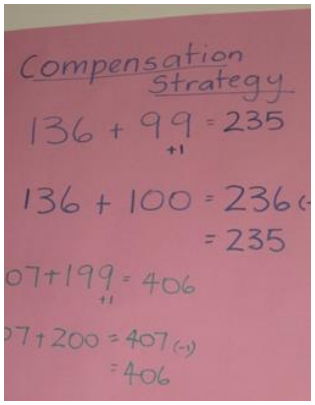
Bridge to 10

'Bridging to 10' refers to the process of adding up to 10 first, then adding on the remaining amount. It can be helpful to first ask 'How many more are needed to make 10?'



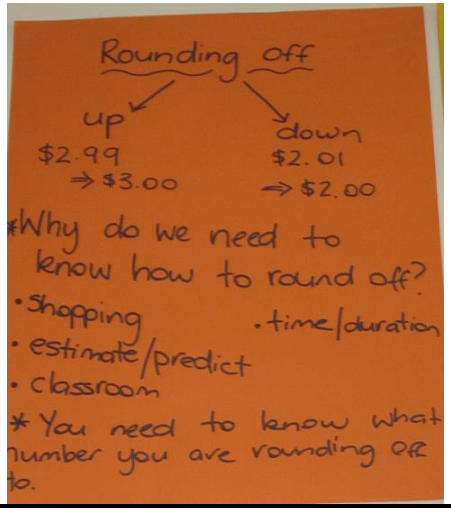
Compensation Strategy

Using 'rounding' to the nearest decade or hundred to simplify the calculation and then the answer is adjusted to compensate for the original change.



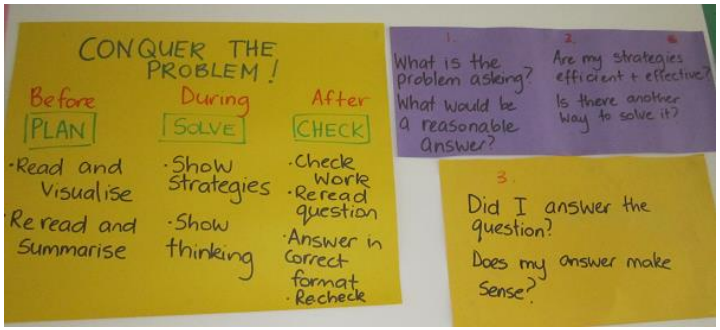
Rounding Off

Rounding off helps when estimating or predicting logical answers as well as checking to see if the answer makes sense.



Problem Solving (Plan, Solve & Check)

Three step process to guide students when problem solving.



If you have any questions, please do not hesitate to see your child's teacher!
