Notes for Parents
Addition

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Addition vocabulary: Add, plus, together, total, sum, increase, more, altogether.

To add successfully, children need to be able to:

- recall all addition pairs to 9 + 9 and complements in 10;
- add mentally a series of one-digit numbers, such as 5 + 8 + 4;
- add multiples of 10 (such as 60 + 70) or of 100 (such as 600 + 700) using the related addition fact, 6 + 7, and their knowledge of place value;
- partition two-digit and three-digit numbers into multiples of 100, 10 and 1 in different ways.

Written Methods for Addition of Whole Numbers

### Stage One: The Empty Number Line

Method	**Example**
The mental methods that lead to column addition generally involve partitioning, e.g. adding the tens and ones separately, often starting with the tens. Children need to be able to partition numbers in ways other than into tens and ones to help them make multiples of ten by adding in steps. The empty number line helps to record the steps on the way to calculating the total.	Steps in addition can be recorded on a number line. The steps often bridge through a multiple of 10. Example :
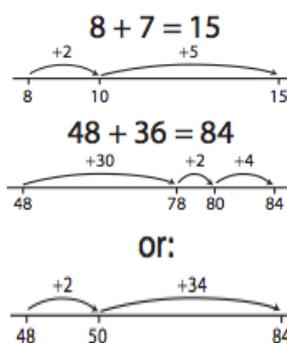
Stage Two: Partitioning

The next stage is to record mental methods using partitioning. Add the tens and then the ones to form partial sums and then add these partial sums.
 	
Partitioning both numbers into tens and ones mirrors the column method where ones are placed under ones and tens under tens. This also links to mental methods.
	Record steps in addition using partitioning:
	
	47+76 = 47+70+6 = 117+6 = 123
	47+76 = 40+70+7+6 = 110+13 = 123
	
	Partitioned numbers are then written under one another:
	
	47 +76 = 40+7
	                   70+6
	                110+13 = 123

Stage Three: The Column Method

Method

In this method, recording is reduced further. Carried digits are recorded below the line, using the words 'carry ten' or 'carry one hundred', not 'carry one'. Later, extend to adding three two-digit numbers, two three- digit numbers, numbers with different numbers of digits and decimal numbers.

Example

$$\begin{array}{r} 47 \\ + 76 \\ \hline 123 \\ {}_{1\ 1} \end{array} \qquad \begin{array}{r} 258 \\ + 87 \\ \hline 345 \\ {}_{1\ 1} \end{array} \qquad \begin{array}{r} 366 \\ +458 \\ \hline 824 \\ {}_{1\ 1} \end{array}$$

Column addition remains efficient when used with larger whole numbers and decimals. Once learned, the method is quick and reliable.

Revision Sites

The following websites can be used to revise the four operations.

http://uk.ixl.com/

http://www.woodlands-junior.kent.sch.uk/maths/

http://www.bbc.co.uk/schools/ks2bitesize/maths/

http://www.crickweb.co.uk/ks2numeracy.html

http://www.compare4kids.co.uk/maths.php

www.groveparkprimary.co.uk