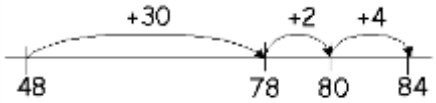
Parents' guide to addition

Unstructured number line

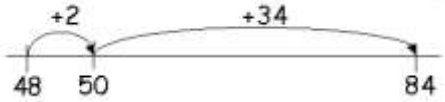
1. Place the starting number at one end.
2. Count on all the tens.
3. Count on all the ones.
4. The number you land on is your answer.

Example:

48 + 36 = 84



or:



Expanded column addition

1. Partition each number into hundreds, tens and ones.
2. Write the hundreds underneath each other.
3. Write the tens underneath each other.
4. Write the ones underneath each other.
5. Add up each column.
6. Recombine the totals.

Examples:

47 + 76 =40 + 7
=70 + 6
110 + 13 = 123

375+567= 300 + 70 + 5
500 + 60 + 7
800 + 130 + 12 = 942

Column addition

This is the one you were taught when you were at school!

1. Write each digit in the correct column.
2. Start with the ones column and add up all the numbers in that column.
3. If one of the columns adds up to 10 or more:
   - put the units of the answer in the column being added.
   - carry the tens digit to the next column on the left under the bottom line.
4. Remember to add in the digit you 'carried' with the next column!
5. Continue until all columns have been added.

Example:

366
+ 458
824
1 1

Say carry "one ten" or "one hundred" not "one"

This method can also be used for decimal numbers. With decimals, writing the decimal point first and copying the numbers either side helps to line them up. If the numbers have a different number of decimal places (digits after the decimal point), fill in the blanks with zeroes as '**placeholders'**.

Example: 3.4 + 2.36

3.40
+ 2.36
5.76

Parents' guide to subtraction

Unstructured number line

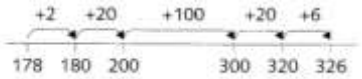
Can be done by counting on from the smallest to the largest number, or counting back from the largest number.

Counting on:

1. Put the lowest number at one end and the highest number at the other end.
2. Starting with the lowest number, count on in 1s, 10s or 100s.
3. Add up the 'jumps' to get the answer.

74 – 27 = 47

326 – 178 = 148



Counting back:

1. Draw the number line with the highest number on the right.
2. Partition the number to be subtracted into hundreds, tens and ones (e.g. 24 is 20 and 4).
3. Count back each hundred, ten or one separately.
4. The number you land on is your answer.

Expanded column subtraction

1. Partition each number into hundreds, tens and ones.
2. Write the tens underneath each other.
3. Write the ones underneath each other.
4. Add the ones.
5. Add the tens.
6. Recombine the totals.

Examples:

76 - 42 = 70 + 6
40 + 2
30 + 4 = 34

577 – 365 = 500 + 70 + 7
300 + 60 + 5
200 + 10 + 2 = 212

Column subtraction

This is the one you were taught when you were at school!

1. Write each digit in the correct column.
2. Start with the ones column and subtract the bottom number from the top (**never** the top from the bottom!!)
3. If the bottom number is bigger, take one away from the next column to the left and exchange it for ten in the current column. Say 'take one away, add on ten'.

Example:

$$\begin{array}{r} {}^{6}\not{7}{}^{1}4 \\ -\ 2\ 7 \\ \hline 4\ 7 \end{array}$$

Exactly as with addition, this method can also be used for decimal numbers. With decimals, writing the decimal point first and copying the numbers either side helps to line them up. If the numbers have a different number of decimal places (digits after the decimal point), fill in the blanks with zeroes as '**placeholders'**.