

## Numbers: Addition and Subtraction

Adding 2 or more numbers together gives you the total of the individual numbers.  
For example  $5 + 3 = 8$  and  $9 - 4 = 5$ .

Try the following for yourself:

### Exercise 1

a)  $2 + 3 =$                       b)  $6 + 3 =$                       c)  $5 - 3 =$                       d)  $8 - 4 =$   
 e)  $1 + 8 =$                       f)  $4 - 1 =$                       g)  $9 - 6 =$                       h)  $3 + 2 =$

When adding numbers with more than one digit (e.g. 14, 2394 or 630) then it's important to remember the value of the digit depends on its position in the number.

The number 2 in 2394 is 2 thousands, 3 is 3 hundreds, 9 tens and 4 units:

$$\begin{array}{r} 2000 \text{ 2 thousands} \\ 300 \text{ 3 hundreds} \\ 90 \text{ 9 tens} \\ \underline{4 \text{ 4 units}} \\ 2394 \end{array}$$

Therefore when adding these numbers make sure to line them up correctly, for example to add 2394 to 630 should be:

$\begin{array}{r} 2394 \\ 630 \\ \hline 3024 \end{array}$	<p><i>First add 4 to 0 giving 4 in the units column, then add the tens 9 and 3 giving 12, 2 get written in the tens columns and the 1 is carried over to the hundreds so in the hundreds column you add 3 to 6 and to the 1 carried over giving 10. The 0 is written in the hundreds column and the 1 is carried over to the thousands column and similarly the digits in the thousands are added 2 and the 1 carried over giving 3</i></p>
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Try this yourself.

### Exercise 2

<p>a) <math display="block">\begin{array}{r} 78 \\ + 121 \\ \hline \hline \end{array}</math></p>	<p>b) <math display="block">\begin{array}{r} 125 \\ + 34 \\ \hline \hline \end{array}</math></p>	<p>c) <math display="block">\begin{array}{r} 419 \\ + 673 \\ \hline \hline \end{array}</math></p>	<p>d) <math display="block">\begin{array}{r} 9435 \\ + 98 \\ \hline \hline \end{array}</math></p>
<p>e) <math display="block">\begin{array}{r} 345293 \\ + 825 \\ \hline 9541 \\ \hline \hline \end{array}</math></p>	<p>f) <math display="block">\begin{array}{r} 1546 \\ + 84 \\ \hline 798 \\ \hline \hline \end{array}</math></p>	<p>g) <math display="block">\begin{array}{r} 375 \\ + 25391 \\ \hline 43245 \\ \hline \hline \end{array}</math></p>	<p>h) <math display="block">\begin{array}{r} 1098 \\ + 7354 \\ \hline 754 \\ \hline \hline \end{array}</math></p>

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When subtracting numbers with more than one digit instead of carrying over we carry forward, see example below.

Subtract 34 from 250:

$\begin{array}{r} 250 \\ - 34 \\ \hline 216 \end{array}$	<p><i>First we have to take 4 away from 0 but because 0 is less than 4 we bring a ten over from the tens column turning the 0 into 10 units and making the 5 tens 4 tens now. 4 away from 10 gives 6, 3 tens away from 4 tens leaves 1 and 0 from 2 gives 2.</i></p>
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Now try thi yourself.

### Exercise 3

<p>a) <math display="block">\begin{array}{r} 785 \\ - 314 \\ \hline \\ \hline \end{array}</math></p>	<p>b) <math display="block">\begin{array}{r} 459 \\ - 308 \\ \hline \\ \hline \end{array}</math></p>	<p>c) <math display="block">\begin{array}{r} 719 \\ - 673 \\ \hline \\ \hline \end{array}</math></p>	<p>d) <math display="block">\begin{array}{r} 9345 \\ - 28 \\ \hline \\ \hline \end{array}</math></p>
<p>e) <math display="block">\begin{array}{r} 45293 \\ - 825 \\ \hline \\ \hline \end{array}</math></p>	<p>f) <math display="block">\begin{array}{r} 1546 \\ - 584 \\ \hline \\ \hline \end{array}</math></p>	<p>g) <math display="block">\begin{array}{r} 3375 \\ - 391 \\ \hline \\ \hline \end{array}</math></p>	<p>h) <math display="block">\begin{array}{r} 10298 \\ - 7354 \\ \hline \\ \hline \end{array}</math></p>

Note: Addition is commutative in other words the order in which the numbers are added doesn't change the result. For example Mrs Jones has 2 dogs, her neighbour Mr and Mrs Davis have only 1 dog and Mr Brown next door has no dogs, all together they have 3 dogs. The order you count the dogs doesn't matter that is  $2+1+0=3$  as does  $0+1+2$ .

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Answers to Exercise 1

- a)  $2 + 3 = 5$       b)  $6 + 3 = 9$       c)  $5 - 3 = 2$       d)  $8 - 4 = 4$   
 e)  $1 + 8 = 9$       f)  $4 - 1 = 3$       g)  $9 - 6 = 3$       h)  $3 + 2 = 5$

Answers to Exercise 2

- |    |  |    |  |    |   |    |  |
|----|--|----|--|----|---|----|--|
| a) | $\begin{array}{r} 78 \\ + 121 \\ \hline 199 \end{array}$                       | b) | $\begin{array}{r} 125 \\ + 34 \\ \hline 159 \end{array}$                 | c) | $\begin{array}{r} 419 \\ + 673 \\ \hline 1092 \end{array}$                    | d) | $\begin{array}{r} 9435 \\ + 98 \\ \hline 9533 \end{array}$                 |
| e) | $\begin{array}{r} 345293 \\ + 825 \\ \hline 9541 \\ \hline 355659 \end{array}$ | f) | $\begin{array}{r} 1546 \\ + 84 \\ \hline 798 \\ \hline 2428 \end{array}$ | g) | $\begin{array}{r} 375 \\ + 25391 \\ \hline 43245 \\ \hline 69011 \end{array}$ | h) | $\begin{array}{r} 1098 \\ + 7354 \\ \hline 754 \\ \hline 9206 \end{array}$ |

Answers to Exercise 3

- |    |   |    |  |    |   |    |   |
|----|---|----|--|----|---|----|---|
| a) | $\begin{array}{r} 785 \\ - 314 \\ \hline 471 \end{array}$     | b) | $\begin{array}{r} 459 \\ - 308 \\ \hline 151 \end{array}$  | c) | $\begin{array}{r} 719 \\ - 673 \\ \hline 46 \end{array}$    | d) | $\begin{array}{r} 9345 \\ - 28 \\ \hline 9317 \end{array}$    |
| e) | $\begin{array}{r} 45293 \\ - 825 \\ \hline 44468 \end{array}$ | f) | $\begin{array}{r} 1546 \\ - 584 \\ \hline 962 \end{array}$ | g) | $\begin{array}{r} 3375 \\ - 391 \\ \hline 2984 \end{array}$ | h) | $\begin{array}{r} 10298 \\ - 7354 \\ \hline 2944 \end{array}$ |