

# Column Addition

**Explanation:** Children will move onto using column addition. This method is quick and efficient as long as the children are prepared with practical methods beforehand. Once able to move on to column addition, they can develop to adding decimals through this method.

## Questions:

					H	T	U
					3	4	7
				+	2	7	1
Add the units then add the tens then add the hundreds:					6	1	8
If the tens add to more than 100, move a 100 into the 100s column.					1		

1.  $44 + 63$

+		4	4
		6	3
=			

2.  $75 + 44$

+		7	5
		4	4
=			

3.  $88 + 31$

+		8	8
		3	1
=			

4.  $52 + 77$

+		5	2
		7	7
=			

1)  $\begin{array}{r} 6045173 \\ + 2146185 \\ \hline \end{array}$     2)  $\begin{array}{r} 1274538 \\ + 6382714 \\ \hline \end{array}$     3)  $\begin{array}{r} 3748295 \\ + 2087537 \\ \hline \end{array}$

4)  $\begin{array}{r} 7532961 \\ + 673829 \\ \hline \end{array}$     5)  $\begin{array}{r} 9024382 \\ + 5839207 \\ \hline \end{array}$     6)  $\begin{array}{r} 6473291 \\ + 8372918 \\ \hline \end{array}$

## Moving onto adding decimals:

The key here is to make sure that the decimal points always line up, otherwise the calculation will not work.

$$\begin{array}{r} 4.2 \\ + 2.8 \\ \hline \end{array}$$

$$\begin{array}{r} 2.3 \\ + 6.7 \\ \hline \end{array}$$

$$\begin{array}{r} 1.5 \\ + 5.6 \\ \hline \end{array}$$

$$\begin{array}{r} 2.1 \\ + 3.9 \\ \hline \end{array}$$

$$\begin{array}{r} 4.8 \\ + 3.6 \\ \hline \end{array}$$

$$\begin{array}{r} 4.5 \\ + 3.9 \\ \hline \end{array}$$

### Addition with missing numbers:

$$\begin{array}{r} 8 \square 7 9 \square \\ + \square 3 \square 2 9 \\ \hline 1 7 7 4 \square 5 \\ \quad 1 \quad 1 \quad 1 \end{array}$$

$$\begin{array}{r} 8 9 5 6 3 \\ + 4 \square 5 \square 9 \\ \hline \square \square 3 \square 2 2 \end{array}$$

$$\_ + 9 = 15$$

$$7 + \_ + 1 = 14$$

Once the children have a good understanding of the column addition method, then challenging them with missing number questions can really move their reasoning skills on. Can they work out the missing number? How can they justify why they are right?

### Typical UKS2 test questions:

There are two different ways that test papers check children's understanding of addition. The first way is looking at abstract methods, including decimals:

$36.4 - 27.8 =$

$2845 + 728 =$

$567,621 + 7,091 =$

$2468 + 92 + 276 =$

The second way is using reasoning skills, from solving a missing number or using word problems to ascertain their deeper understanding of the skill:

Write the three missing digits to make this addition correct. This table shows the heights of three mountains.

$$\begin{array}{r} \begin{array}{|c|c|c|c|c|} \hline 5 & 3 & 2 & \square & 9 \\ \hline \end{array} \\ + \begin{array}{|c|c|c|c|} \hline 7 & 4 & 2 & \square \\ \hline \end{array} \\ \hline \begin{array}{|c|c|c|c|c|} \hline \square & 0 & 6 & 7 & 6 \\ \hline \end{array} \end{array}$$

Mountain	Height in metres
Mount Everest	8,848
Mount Kilimanjaro	5,895
Ben Nevis	1,344

How much higher is Mount Everest than the combined height of the other two mountains?