





## Year 4 Addition and Subtraction

**Key words:** column method, place value, digits, thousands, hundreds, tens, ones, regrouping, exchanging.

**Resources:** hundred square, place value grid, number line, counters, ruler.

By Year 4, children should be able to add and subtract up to 4-digit numbers using the column method and the processes of regrouping and exchanging.

	<b>Addition</b>	<b>Solution</b>
<b>WTS</b>	 <p>Can you write this as a calculation? Now complete <math>3,242 + 213</math> in the same way. What is the same? What is different? Look at how the place value columns are lined up in the new question.</p>	$\begin{array}{r} 3242 \\ + 2213 \\ \hline 5455 \end{array}$ $\begin{array}{r} 3242 \\ + 213 \\ \hline 3455 \end{array}$ <p>The H, T and O's digits are the same. The Th digit is different.</p>
<b>EXS</b>	<p>Two children completed the following calculation:</p> <p style="text-align: center;"><math>1,234 + 345</math></p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; width: 200px;"> <p>When I added 1,234 and 345 together I got 1,589.</p> </div> <div style="text-align: center;">  <p>Suri</p> </div> <div style="text-align: center;">  <p>Eleanor</p> </div> </div> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; width: 200px; margin: 10px auto;"> <p>I added 1,234 to 345 and I got 4,684.</p> </div> <p>Both of the children have made a mistake in their calculations. Calculate the actual answer to the question. What mistakes did they make?</p>	$\begin{array}{r} 1234 \\ + 345 \\ \hline 1579 \end{array}$ <p>Suri = 1589 - She thought that <math>3+4 = 8</math> not 7.</p> <p>Eleanor = 4684 - She didn't line the sum up correctly.</p> $\begin{array}{r} 1234 \\ + 345 \\ \hline 4684 \end{array}$
<b>GDS</b>	<p>Luke says:</p> <div style="text-align: center;">  </div> <div style="border: 1px solid gray; border-radius: 10px; padding: 10px; width: 250px; margin: 10px auto;"> <p>When I add two numbers together I will only ever make up to one exchange in each column.</p> </div> <p>Is Luke correct? Explain your answer</p>	<p>Luke is correct because the highest digit you can use is 9 and <math>9+9=18</math>, so the '10' would be exchanged. E.g.</p> $\begin{array}{r} 9999 \\ + 9999 \\ \hline 19998 \\ \hline \end{array}$ <p style="text-align: center;">x x x</p>

# Subtraction

**WTS**

1 Subtract 2,332 from the number below.



2 Complete this subtraction problem.

	Thousands	Hundreds	Tens	Ones
	7	6	4	6
-	4	3	3	5
	3	3	1	1

Use APE to explain how you know you are correct.

$$\begin{array}{r} 3454 \\ - 2332 \\ \hline 1122 \end{array}$$

A: 3311

P: ←

E: I know I am correct because I started from the ones column and worked left, - the bottom number from the top.

**EXS**

There were 2,114 visitors to the museum on Saturday.  
650 more people visited the museum on Saturday than on Sunday.



Altogether how many people visited the museum over the two days?

What do you need to do first to solve this problem?

Saturday = 2114

$$\begin{array}{r} 2114 \\ - 650 \\ \hline 1464 \end{array}$$

3578	
2114	1464
Sat	Sun

$$\begin{array}{r} 2114 \\ + 1464 \\ \hline 3578 \end{array}$$

I had to subtract first and then add.

**GDS**

Find the missing numbers that could go into the boxes.

Give reasons for your answers.

$$\square - 1,345 = 4\square 6$$

What is the greatest number which could go in the first box? → 1841

What is the smallest? → 1751

How many possible answers could you have? → 10

What is the pattern between the numbers? → Both numbers increase by 10.  
10 possible answers



$$\begin{array}{r} 1345 \\ + 496 \\ \hline 1841 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 4\square 6 \\ \hline 1751 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 4\square 6 \\ \hline 1761 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 4\square 6 \\ \hline 1771 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 436 \\ \hline 1781 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 446 \\ \hline 1791 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 456 \\ \hline 1801 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 466 \\ \hline 1811 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 476 \\ \hline 1821 \\ \hline \end{array}$$

$$\begin{array}{r} 1345 \\ + 486 \\ \hline 1831 \\ \hline \end{array}$$