



**What should I already know?**

- How to add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction (where appropriate)
- How to estimate and use inverse calculations to check answers
- How to solve addition and subtraction two step problems
- How to decide which operation and method to use when solving problems

**What will I know by the end of the unit?**

- How to add whole numbers with more than four digits using the column method
- How to subtract whole numbers with more than four digits using the column method
- How to use my knowledge of rounding to estimate answers for calculations and problems
- How to use inverse operations to check my answers to addition and subtraction calculations
- How to use my knowledge of addition and subtraction to solve multi-step problems

**Vocabulary**

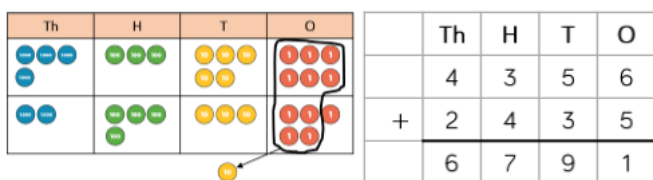
<b>increase</b>	get larger in size, number or quantity	<b>problem</b>	in mathematics a problem is a question which needs a mathematical solution.
<b>altogether</b>	to join two or more numbers or quantities to get one number	<b>strategy</b>	a plan, a method or a way to solve a problem or reach an answer.
<b>add</b>		<b>accuracy</b>	accuracy describes the degree to which a recorded value is detailed, correct and free from error.
<b>plus</b>		<b>approximate</b>	to estimate a number, amount or total
<b>more</b>		<b>calculate</b>	to work something out, a mathematical operation
<b>sum</b>	the result of addition.	<b>calculation</b>	
<b>total</b>		<b>Consecutive numbers</b>	numbers that follow each other in an unbroken sequence.
<b>subtract</b>		<b>digit</b>	symbol used to show a number.
<b>take away</b>	to take one quantity away from another.	<b>inverse</b>	opposite, reverse operations.
<b>minus</b>			
<b>less</b>	the difference between two quantities or values involves subtraction.	<b>estimate</b>	to make an approximate calculation, often based on rounding.
<b>leave</b>		<b>numeral</b>	symbol used to represent a number.
<b>fewer</b>		<b>partition</b>	a strategy that splits (partitions) numbers into smaller addends, factors or place values to make calculations easier.
<b>decrease</b>		<b>operation</b>	mathematical procedures or processes used to work something out.
<b>difference</b>		<b>pattern</b>	repeated design or recurring sequence. An ordered set of numbers, shapes or other mathematical objects, arranged according to a rule.
<b>solution</b>	the answer to a problem.	<b>predict</b>	say or estimate that (a specified thing) will happen in the future or will be a consequence of something.
<b>round</b>	to change a number to a more convenient value.	<b>whole number</b>	a counting number from zero to infinity, no fractions, decimal fractions or negative numbers.
<b>multi-step</b>	More than one step		



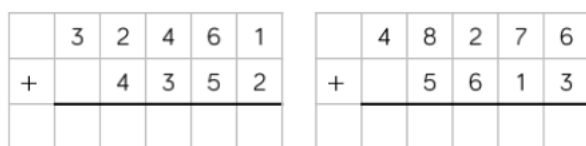
Diagram / Key information/Example questions

Column Addition

Ron uses place value counters to calculate  $4,356 + 2,435$

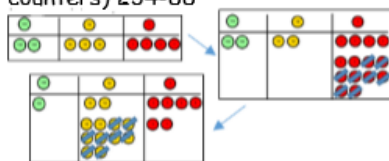


Use Ron's method to calculate:



Column Subtraction

Column method (using place value counters)  $234 - 88$



Once the children have had practice with the concrete, they should be able to apply it to any subtraction.

Like the other pictorial representations, children to represent the counters.

$$\begin{array}{r} 234 \\ - 88 \\ \hline 146 \end{array}$$

Investigate/Homework tasks

- Homework will be set from the booklet issued by your teacher
- You should complete at least 30 minutes of maths tasks on Maths Whizz (not games). Please attend help sessions if you do not have access to the internet at home
- Additional work you could complete:
  - Find out more about the meaning of the vocabulary list using <http://www.amathsdictionaryforkids.com/>
- To challenge yourself:
  - Investigate the key questions typed in red text
  - Explain the key questions typed in purple text
  - Challenge yourself by answering the green questions

Key skills/Timeline/Topic Questions

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>● When using column addition/subtraction                             <ul style="list-style-type: none"> <li>○ When will you have to exchange?<br/>How do you know which columns will be affected?</li> <li>○ When using column addition/subtraction does it matter that the two numbers don't have the same number of digits?</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>● When estimating                             <ul style="list-style-type: none"> <li>○ How do you know which number you should round to?</li> <li>○ Why should an estimate be quick?</li> <li>○ When, in real life, would we use an estimate?</li> </ul> </li> <li>● Checking your answers                             <ul style="list-style-type: none"> <li>○ What is the inverse of addition?</li> <li>○ What is the inverse of subtraction?</li> </ul> </li> </ul> |
|---|---|



Topic: Addition and Subtraction

Year: 5

NC Strand: Number

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>○ Which number goes on top in the calculation? Does it affect the answer?</li><li>○ Why is it important we start subtracting the smallest place value first?</li></ul> | <ul style="list-style-type: none"><li>○ How can you tell if your answer is sensible? Give examples</li><li>● Solving problems using addition and subtraction?<ul style="list-style-type: none"><li>○ What vocabulary would mean you use addition/subtraction?</li><li>○ What models could you draw to show a problem? Give examples</li></ul></li></ul> |
|--|---|