Be fluent - estimate, round and adjust and check

Look at the value of the numbers – *Can I calculate mentally or do I need a written method?*

3689 + 4998   3689 + 5000

3682 − 2996   3686 − 3000
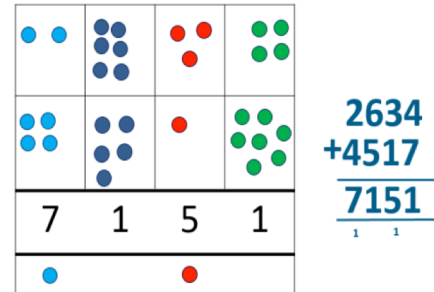Adjust both numbers to simplify the calculation

Estimate   25,034 − 7,185
is approx.   25,000 − 7,000

Check answers in different ways
check 8.3 + 1.9   by adding in a different order

8.3 + 2 − 0.1
or
8.3 + 0.7 + 1.2

Written methods for addition
Once pupils are secure with using the expanded method to add numbers, they will focus on the compact method using larger numbers and decimal numbers also.

2634
+4517

7151

Multi-step problems
I am thinking of a number. I double it and then subtract 6. My answer is 8. What was my number?

Year 5
Addition and Subtraction

Real life Problems
Katie was given this calculation
47326 − 1900 =
How can she solve it mentally?

Understand the inverse relationship between addition and subtraction.

Addition is commutative (order doesn't matter) but subtraction is not commutative (order...)

Contin...
place v...
to one...
1.2 pl...

$$\begin{array}{r} 2\,5,0\,6\,3 \\ +\quad 7,4\,5\,9 \\ \hline 3\,2,5\,2\,2 \\ {\scriptstyle 1\quad 1\ 1} \end{array}$$

$$\begin{array}{r} £1\,7\,2\,.\,8 \\ +£\quad 5\,4\,.\,6 \\ \hline £2\,2\,7\,.\,5 \\ {\scriptstyle 1\quad 1\ 1} \end{array}$$

Know complements to 1
0.78 +   = 1   1 - 0.52 =

Recall pairs of three-digit numbers with a total of 1000
456 +   = 1000   1000 =   + 825

and derive associated subtraction facts
1000 - 453 =   1000 - 239 =
1000 − 712 =

Continue to solve missing number problems
6.5 +   = 10.7   = 8.4 + 3.7
7.3 + 2.9 = 9.9 +   5.2 <   - 0.9

Written methods for subtraction
Once pupils are secure with using the expanded method to subtract, they will focus on the compact method using larger numbers and decimal numbers also.

Th	H	T	O	
1000 ^{200}300	^{1}60	7		
-	100	80	5	
1000	100	80	2	= 1182

$$\begin{array}{r} 1\,3\,{}^1 6\,7 \\ -\ 1\,8\,5 \\ \hline 1\,1\,8\,2 \end{array}$$

Subtraction with decimals ─align decimal points

$$\begin{array}{r} 6\,{}^1 4 \\ 7\,5\,.\,{}^1 4 \\ -\ 8\,.\,6 \\ \hline 6\,6\,.\,8 \end{array}$$

Use the correct vocabulary
partition, recombine, calculate, plus, add total, increase, sum, altogether, how much many more ? decrease, minus, subtract

Investigate
What do you notice about the differences between consecutive square numbers?

Always, sometimes, never true
The difference between a number and its reverse will be a multiple of 9.