

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?*

$$3689 + 4998 \quad 3689 + 5000$$

$$3682 - 2996 \quad 3686 - 3000$$

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

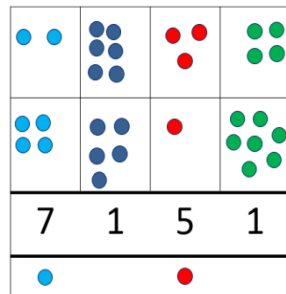
$$8.3 + 2 - 0.1$$

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.



$$\begin{array}{r} 2634 \\ +4517 \\ \hline 7151 \\ \hline \end{array}$$

$$\begin{array}{r} 25,063 \\ + 7,459 \\ \hline 32,522 \\ \hline \end{array}$$

$$\begin{array}{r} \text{£} 172.83 \\ + \text{£} 54.68 \\ \hline \text{£} 227.51 \\ \hline \end{array}$$

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 affects the calculation)

Continue to use knowledge of addition facts and place value to derive related facts with numbers to one decimal place

$$1.2 \text{ plus } 0.7 \quad 0.3 \text{ more than } 1.7$$

Know complements to 1

$$0.78 + \square = 1 \quad 1 - 0.52 = \square$$

Recall pairs of three-digit numbers with a total of 1000

$$456 + \square = 1000 \quad 1000 = \square + 825$$

and derive associated subtraction facts

$$1000 - 453 = \square \quad 1000 - 239 = \square$$

$$1000 - 712 = \square$$

Continue to solve missing number problems

$$6.5 + \square = 10.7 \quad \square = 8.4 + 3.7$$

$$7.3 + 2.9 = 9.9 + \square \quad 5.2 < \square - 0.9$$

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	300	160	7
-	100	80	5
1000	100	80	2 = 1182



$$\begin{array}{r} 13167 \\ - 185 \\ \hline 1182 \end{array}$$

Subtraction with decimals – align decimal points

$$\begin{array}{r} 6^{14} \\ 75.^{14} \\ \underline{8.6} \\ 66.8 \end{array}$$

Use the correct vocabulary

partition, recombine, calculate, plus, add total, increase, sum, altogether, how much /many more..? decrease, minus, subtract take away, less, fewer, difference partition, exchange, adjust

Solving problems

Abdul says "If I add any two 4 digit numbers together it will make a 5 digit number." Do you agree? Explain why.

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.