Key Terms and questions

Addition add total plus sum more altogether increase double near double

Subtraction difference subtract less minus take away

How many more to make..? How much more? How many more? How many fewer?

Formal Methods

Column addition and subtraction

Add 4-digit numbers

No exchange

$$\begin{array}{r} 5162 \\ +3427 \\ \hline 8589 \end{array}$$

Starting with the ones, add each column in turn.

One exchange

$$\begin{array}{r} 5162 \\ +3497 \\ \hline 8659 \\ \hline 1 \end{array}$$

Starting with the ones, add each column in turn. When adding 6 tens + 9 tens = 15 tens = 1 hundred + 5 tens

Place 1 hundred under the hundreds answer and 5 tens in the answer.

Multiple exchanges

$$\begin{array}{r} 5864 \\ +3497 \\ \hline 9361 \\ \hline 111 \end{array}$$

Starting with the ones, add each column in turn. Exchange tens, hundreds and/ or thousands as required.

Subtract 4-digit numbers

No exchange

$$\begin{array}{r} 5789 \\ -3421 \\ \hline 2368 \end{array}$$

Starting with the ones, subtract each column in turn.

One exchange

$$\begin{array}{r} {\scriptstyle 6\ 1} \\ 5749 \\ -3471 \\ \hline 2278 \end{array}$$

Starting with the ones, subtract each column in turn. When subtracting 4 tens -7 tens, exchange 1 hundred to make:

14 tens – 7 tens = 7 tens

Multiple exchanges

$$\begin{array}{r} {\scriptstyle 6\ 13\ 1} \\ 5742 \\ -3476 \\ \hline 2266 \end{array}$$

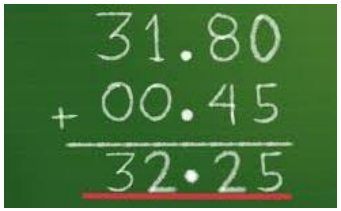
Starting with the ones, subtract each column in turn. Exchange tens, hundreds and/ or thousands as required.

Vocabulary

addition +	Bringing two or more numbers (or things) together to make a new total.
subtraction -	Taking one number away from another.
mental/ mentally	Calculating in your head.
column addition	Addition by writing one number below the other and then adding one column at a time
column subtraction	Addition by writing one number below the other and then subtracting one column at a time
estimate	To find a value that is close enough to the right answer, usually with some thought or calculation involved.
inverse	Inverse means the opposite in effect. The reverse of. The Inverse of Adding is Subtracting
boundary	When crossing ones, tens or hundreds boundaries more than one digit will change.
equals sign =	Is the same as

Adding and subtracting with decimals

	£	2	3	.	5	9
+	£		7	.	5	5
	£	3	1	.	1	4
		1	1		1	



76.3
- 34.1
42.2

£10	£1	.	10p	1p
5 6	1 4	.	7 8	1 1
- 2	5	.	6	2
£ 3	9	.	1	9

Using rounding to estimate

1635 + 386 = 2021

Round to the nearest ten

1640 + 390 = 2030

Round to the nearest hundred

1600 + 400 = 2000

Both give a reasonable estimate, but rounding the nearest ten is more accurate.

9362 – 5729 = 3622

Round to the nearest hundred

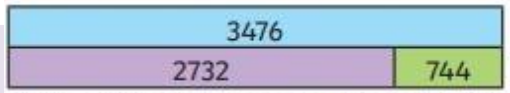
9400 – 5700 = 3700

Round to the nearest thousand

9000 – 6000 = 3000

Rounding to the nearest hundred is much more accurate in this case.

Use the inverse to check your answer



3476 – 744 = 2732 can be checked using

2732 + 744 = 3476

This part whole shows the inverse calculations using these three numbers.

1549 + 2688 = 4237	2688 + 1549 = 4237
4237 – 1549 = 2688	4237 – 2688 = 1549

Commutative and Associative

Communitive

342 + 187 is equal to 187 + 342

Associative

Addition can be done in any order

46 + 39 +14 = 46 + 14 + 39

Addition

8 + 9 = 17

addend + addend = sum

Subtraction

17 - 9 = 8

minuend – subtrahend = difference