

Year 4 Addition and Subtraction Knowledge

 add	 total	 plus	$\frac{2}{+3}$ sum	 column addition	 column subtraction	 mentally, orally
 more	 altogether	 difference	 subtract	 inverse operation	 solve problems	$3 \times 2 =$ number facts
 less	 minus	$3 - 1 - 2 =$ take away	$3 \times 2 + 5 =$ calculation	 exchange	 estimate	HTU 3 5 4 place value

addition

- add
- more
- plus
- make
- sum
- total
- altogether

How many more to make...?

How many more is... than...?

How much more is...?

subtraction

- subtract
- minus
- leave
- less
- take away
- difference between

How many are left over?

How much less is... than...?

How many fewer is...?

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

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

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

Multiple exchanges

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

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

$$\begin{array}{r} 61 \\ 5749 \\ -3471 \\ \hline 2278 \end{array}$$

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

$$\begin{array}{r} 6131 \\ 5742 \\ -3476 \\ \hline 2266 \end{array}$$

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

We can estimate answers using **near numbers**.

E.g. $167 - 89$
 $170 - 90 = 80$

Near numbers:

413	279	521	782
↓	↓	↓	↓
400	300	500	800

Efficient subtraction

Calculate $6000 - 3617 = 2383$

Add and Subtract 1s, 10s, 100s, and 1,000s

TH	H	T	O
2	6	3	8

Checking Strategies

Using Inverse

3476	
2732	744

$3476 - 744 = 2732$ can be checked using $2732 + 744 = 3476$

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

$1549 + 2688 = 4237$	$2688 + 1549 = 4237$
$4237 - 1549 = 2688$	$4237 - 2688 = 1549$

Adding in a different order

$420 + 372 + 280 =$

Change to

$420 + 280 + 372 =$

As $420 + 280 = 700$

(because $42 + 28 = 70$)

$420 + 280 + 372 = 700 + 372 = 1072$

If I add ones to a number, I need to add it to the digit in the ones column.

The same applies if you are adding tens, hundreds or thousands - you add to the digit in that place value column.

If I add a multiple of 100 to the number above, the tens and ones will not change. The thousands will only change when the hundreds totals more than 9.