



YEAR 4 MATHS, ADDITION AND SUBTRACTION

Addition and Subtraction		Knowledge Organiser	
Key Vocabulary	Addition and Subtraction Methods		
Add	Add 4-digit numbers		Subtract 4-digit numbers
Total	No exchange		No exchange
Plus	$\begin{array}{r} 5162 \\ +3427 \\ \hline 8589 \end{array}$		$\begin{array}{r} 5789 \\ -3421 \\ \hline 2368 \end{array}$
Sum	Starting with the ones, add each column in turn.		Starting with the ones, subtract each column in turn.
More			
Altogether	One exchange		One exchange
Difference	$\begin{array}{r} 5162 \\ +34\mathbf{9}7 \\ \hline 86\mathbf{5}9 \\ 1 \end{array}$		$\begin{array}{r} 61 \\ 5\mathbf{7}49 \\ -34\mathbf{7}1 \\ \hline 2278 \end{array}$
Subtract	Starting with the ones, add each column in turn. When adding 6 tens + 9 tens = 15 tens = 1 hundred + 5 tens		Starting with the ones, subtract each column in turn. When subtracting 4 tens - 7 tens, exchange 1 hundred to make:
Less	Place 1 hundred under the hundreds answer and 5 tens in the answer.		14 tens - 7 tens = 7 tens
Minus	Multiple exchanges		Multiple exchanges
Take away	$\begin{array}{r} 5864 \\ +3497 \\ \hline 9361 \\ 111 \end{array}$		$\begin{array}{r} 6131 \\ 5\mathbf{7}42 \\ -3476 \\ \hline 2266 \end{array}$
Mentally, Orally	Starting with the ones, add each column in turn. Exchange tens, hundreds and/ or thousands as required.		Starting with the ones, subtract each column in turn. Exchange tens, hundreds and/ or thousands as required.
Column Addition			
Column Subtraction			
Exchange			
Estimate			
Inverse operation			
Solve problems			
Number facts			
Efficient subtraction			
Calculate $6000 - 3617 = 2383$			



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Addition and Subtraction

Add and Subtract 1s, 10s, 100s, 1000s

Here is the number 3124



Add 2 thousands = 5124

Add 5 hundreds = 5624

Subtract 2 tens = 5604

Add 5 ones = 5609

Here is the number 6708

Thousands	Hundreds	Tens	Ones
6	7	0	8

Add 3 thousands = 9708

Subtract 4 hundreds = 9308

Add 5 tens = 9358

Subtract 7 ones = 9351

Crossing ones, tens or hundreds

5392 + 4 tens = 5432 crossing tens

5126 - 600 = 4526 crossing hundreds

When crossing ones, tens or hundreds, more than one digit will change.



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Knowledge Organiser

Round 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

$$9400 - 5700 = 3700$$

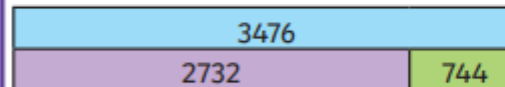
Round to the nearest thousand

$$9000 - 6000 = 3000$$

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

Checking Strategies

Using Inverse



$3476 - 744 = 2732$ 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

$$420 + 280 + 372 =$$

$$\text{As } 420 + 280 = 700$$

(because $42 + 28 = 70$)

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