'I WILL SHINE'

Addition and subtraction

Prior learning

Let's activate my long-term memory!

In Y3, I learnt to...

- add and subtract numbers mentally, including a three-digit number and ones/tens/hundreds
- add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction
- estimate the answer to a calculation and use inverse operations to check my answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Key vocabulary

What words will I use in this unit?
Do I recognise any already?

add, more, increase, total, plus, sum, subtract, take way, find the difference, minus, inverse, estimate

Tools and drawings

Which tools and drawing might I use to support my learning?

PV grid, Dienes, counters, bar model, part-whole (cherry diagram)

Current learning

In this unit, I will learn how to...

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Knowledge Organiser

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

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

$$\begin{array}{r} {}^{6}5{}^{13}\cancel{7}{}^{1}\cancel{4}2 \\ -\ 3476 \\ \hline 2266 \end{array}$$

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

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

5**39**2 + **4** tens = 5**43**2 crossing tens
5126 – **6**00 = **45**26 crossing hundreds

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

Round to Estimate

1635 + 386 = 2021
Round to the nearest ten
1640 + 390 = 2030
Round to the nearest hundred
1600 + 400 = 2000

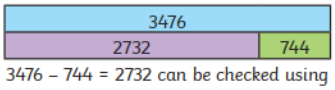
Both give a reasonable estimate, but rounding the nearest ten is more accurate.

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.

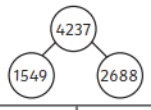
Checking Strategies

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

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