Use number sense

Rounding numbers to estimate
2467 + 1729 is approximately
2500 + 1700

Partition numbers
732 – 137 (by partitioning the second number and counting back; -100, -32, -5)

Find the difference rather than subtract
607 – 288 (by counting up from 288, bridging the hundreds boundary; +12, +400, +7)

Calculate and adjust
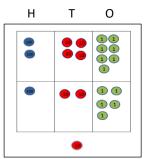1487 – 199 (by subtracting 200 and adding 1)

Check using inverse operations
check 564 – 150 = 414 with
414 + 150 = 564

Representations to support addition

We can use equipment to find the total of two numbers. This builds on the expanded method from Y3 into the compact method.


```
  H  T  O
 200 40  7
+100 20  5
 300 60 12 = 372
```

```
  H   T  O
 200  40  7
+100  20  5
 300  70  2  = 372
          1
```

```
 H T O
 2 4 7
+1 2 5
 3 7 2
     1
```

Prove it!
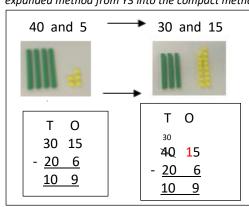Addition and subtraction are the inverse (opposite) of each other

Year 4
Addition and Subtraction

A Problem with Measures
The perimeter of a rectangle is 40cm. What could the sides measure? Are there different solutions?

Understand the inverse relationship between addition and subtraction.

Continue to understand the inverse relationship between addition and subtraction, including with missing numbers

256+92=348   92+256=348
348=256+92   348=92+256
348-256=92   348-92=256
92= 348-256   256=348-92

Recognise that **256 + 92 is equal to 92 + 256**
Addition is commutative (order doesn't matter)

Recognise that subtraction is not commutative (order affects the calculation)
348 – 92 is not equal to 92 - 348

Understand that missing number problems can often be solved by working backwards by using the inverse operation
456 + ☐ = 673   ☐ = 300 + 176   ☐ + ☐ = 125
1000 - 103 = 450 + ☐   450 < ☐ + 60

Representations to support subtraction

We can use equipment to find the difference between two numbers. This builds on the expanded method from Y3 into the compact method.

40 and 5 → 30 and 15


```
45 - 26
Partition 45 into 30 and 15
Subtract ones    15 – 6 = 9
Subtract tens    30 – 20 = 10
                         19
```

```
 T  O
30 15
-20  6
10  9
```

```
  T   O
    30
  4̶0  15
-  20   6
   10   9
```

```
  T  O
  3
  4̶  15
- 2   6
  1   9
```
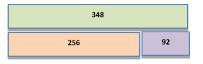
Use the correct vocabulary
partition, recombine, calculate, plus, add total, increase, sum, altogether, how much /many more..? decrease, minus, subtract take away, less, fewer, difference partition, exchange, adjust

Real life problems

Joe has 257 football stickers and Ayush has 365. How many stickers do they have altogether?   Check your answer by using the inverse calculation.

Investigate
Always, sometimes, never true

A four digit number plus a 4 digit number equals a four digit number

The sum of 3 odd numbers is even.