

Addition and Subtraction

Key Vocabulary	Addition	Subtraction
Add	Place Value Grid: $3274 + 5601 = 8875$	Place Value Grid: $35\,727 - 6313 = 29\,414$
Total		
Make		
Plus		
Sum		
More		
Altogether		
Difference		
Subtract		
Less		
Minus		
Take away		
Column addition		
Column subtraction		
Estimate		
Inverse operation		
Number facts		
Place value		
Complex		

Th	1000 1000 1000 1000 1000 1000 1000 1000
H	100 100 100 100 100 100 100 100
T	10 10 10 10 10 10 10
O	1 1 1 1 1

Column Method

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

45864

+23497

69361

111

TTh	10 000 10 000 10 000	2 ten thousands left
Th	1000 1000 1000 1000 1000 1000 1000 1000 1000	5 thousands – 6 thousands cannot be done. Exchange ten thousand for ten thousands becoming 15 thousands – 6 thousands = 9 thousands
H	100 100 100 100 100 100 100	7 hundreds – 3 hundreds = 4 hundreds
T	10 10	2 tens – 1 ten = 1 ten
O	1 1 1 1 1 1 1	7 ones – 3 ones = 4 ones

Column Method

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

35742

- 6313

32266

Addition and Subtraction

Estimate and Approximate

Rounding to Estimate

$$41\ 635 + 7386 = 49\ 021$$

Round to ten:

$$41\ 630 + 7380 = 49\ 010$$

$$41\ 630 + 7390 = 49\ 020$$

$$41\ 640 + 7390 = 49\ 030$$

Rounding is not as accurate when both numbers are rounded up. A better estimate comes from "rounding" one down and one up.

Estimating on a Number Line



The arrow is about $\frac{3}{4}$ of the way across the line so it is 40 000.



Inverse Operations

Use the inverse to check:

53 476

32 732

20 744

To check $53\ 476 - 32\ 732 = 20\ 744$
use $32\ 732 + 20\ 744 = 53\ 476$

Start with a number, subtract 409 and double. I end with 6264. To find the starting number use the inverse: halve, then add 409. Half of 6264 = 3132. $3132 + 409 = 3541$. The starting number was 3541.

Multistep Problems

Using a Bar Model

The sum of two numbers is 25 567.

The difference is 1875.



Subtract 1875 from 25 567 = 23 692.

Halve 23 692 to find smaller number = 11 846.

Add 1875 to find larger number = 13 721.

£20			£20 is used to buy 2 books costing £3.75 and £8.49.
£3.75	£8.49	?	
£12.24		£7.76	How much change is given?

$$£3.75 + £8.49 = £12.24$$

$$£20.00 - £12.24 = £7.76$$