Addition and Subtraction – Year 5

Key Vocabulary

- Add
- Total
- Make
- Plus
- Sum
- More
- Altogether
- Difference
- Subtract
- Less
- Minus
- Take away
- Column addition
- Column subtraction
- Estimate
- Inverse operation
- Number facts
- Place value
- Complex

Addition

Place Value Grid: 3274 + 5601 = 8875

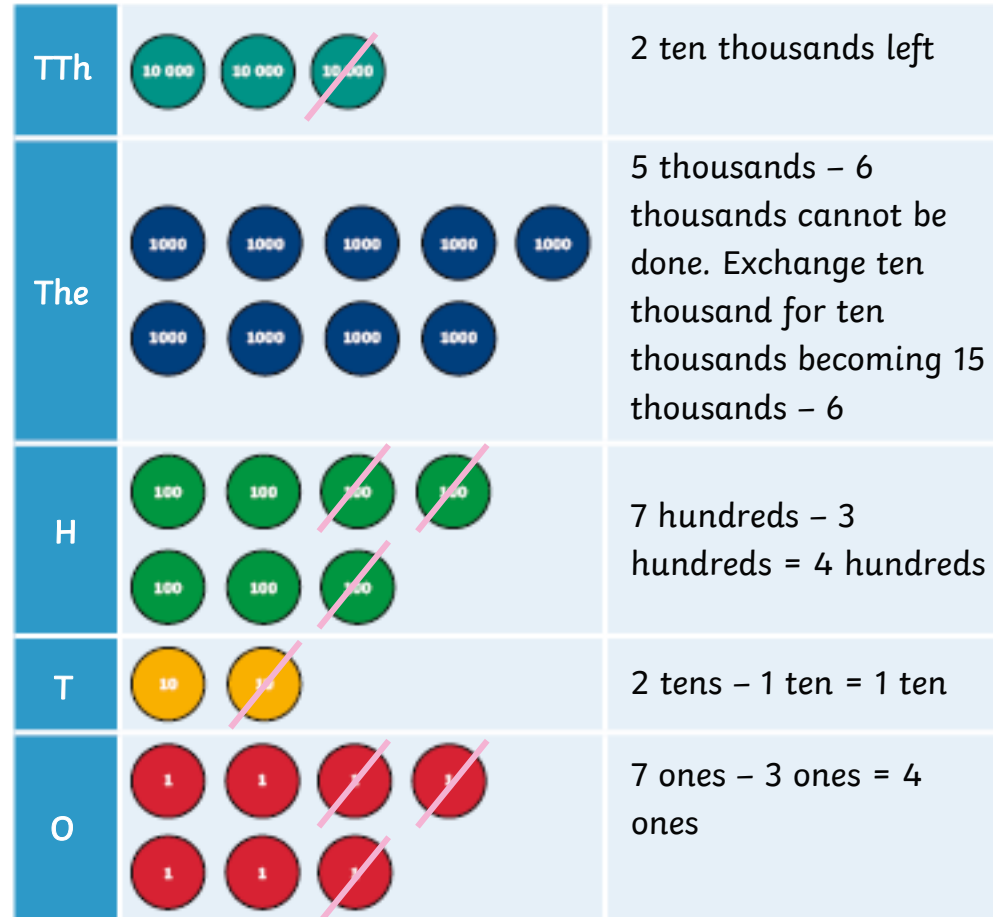|	
Th	1000 1000 1000 1000 / 1000 1000 1000 1000
H	100 100 100 100 / 100 100 100 100
T	10 10 10 10 / 10 10 10
O	1 1 1 1 1
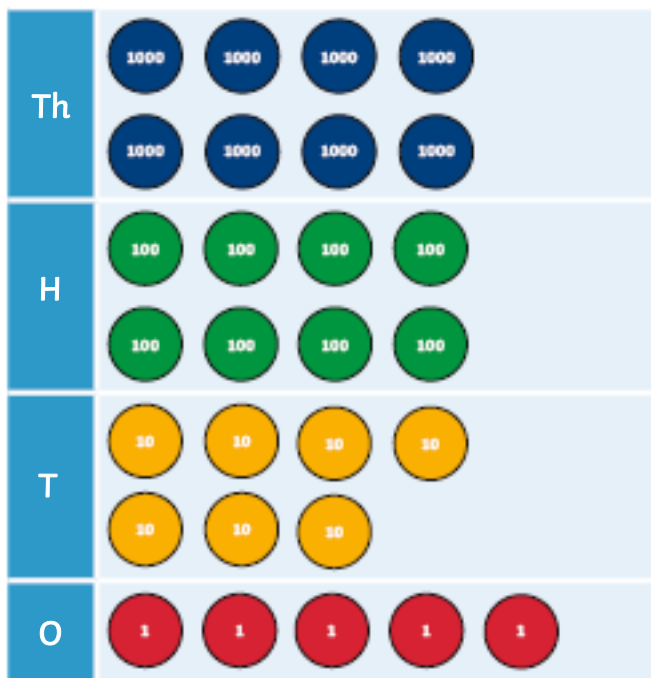
Column Method

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

$$
\begin{array}{r}
45864 \\
+\ 23497 \\
\hline
69361 \\
\hline
111
\end{array}
$$

Subtraction

Place Value Grid: 35 727 – 6313 = 29 414

TTh	10 000 10 000 10̶ ̶0̶0̶0̶	2 ten thousands left
The	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
H	100 100 1̶0̶0̶ 1̶0̶0̶ / 100 100 1̶0̶0̶	7 hundreds – 3 hundreds = 4 hundreds
T	10 1̶0̶	2 tens – 1 ten = 1 ten
O	1 1 1̶ 1̶ / 1 1 1̶	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.

$$
\begin{array}{r}
\overset{6\ \ 13\ 1}{35742} \\
-\ 3476 \\
\hline
32266
\end{array}
$$

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

10 000   50 000

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.

25 567

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		
£3.75	£8.49	?
£12.24		£7.76

£20 is used to buy 2 books costing £3.75 and £8.49.

How much change is given?

£3.75 + £8.49 = £12.24
£20.00 - £12.24 = £7.76