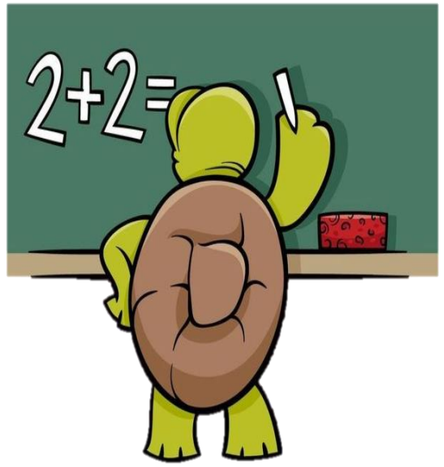
# ADDITION and SUBTRACTION KNOWLEDGE ORGANISER

Year 4

## Overview




**Addition and Subtraction** we learn:

-Add and subtract 1s, 10s, 100s and 1000s.

-Add and subtract two 3-digit numbers

-Add and subtract two 4-digit numbers

-Efficient subtraction

-Estimate answers -Checking strategies

Addition and Subtraction is useful learning because it is used in many areas of everyday life – e.g. shopping, cooking, or playing games. It also forms the basis for lots of other maths ideas.

## Addition Methods – Two 4-digit Numbers

### No Exchange

1584 + 2402 = 2986

$$\begin{array}{r} 1584 \\ +\ 2402 \\ \hline 3986 \end{array}$$

Starting with the ones, simply add each column in turn.

Be sure to check over your answer for careless calculation errors.

### 1 Exchange

2575 + 5292 = 7867

$$\begin{array}{r} 2575 \\ +\ 5292 \\ \hline 7867 \\ 1 \end{array}$$

Starting with the ones, add each column in turn. When calculating 7 tens plus 9 tens, the answer is above 10 tens (16 tens = 160).
Place 6 tens as the answer and 1 hundred under the hundreds answer. Include this in the next calculation.

### 2 Exchanges +

2575 + 5292 = 7867

$$\begin{array}{r} 3916 \\ +\ 2779 \\ \hline 6695 \\ 1\ \ 1 \end{array}$$

Starting with the ones, add each column in turn.

Exchange tens, hundreds, or thousands as required.

Don't forget to add the exchanged number into the next calculation.

## Subtraction Methods – Two 4-digit Numbers

### No Exchange

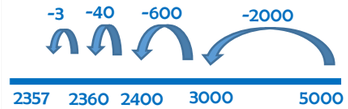
3868 - 2227 = 1641

$$\begin{array}{r} 3868 \\ -\ 2227 \\ \hline 1641 \end{array}$$

Starting with the ones, simply subtract each column in turn.

### Efficient Subtraction

5000 – 2643 = 2357




### 1 Exchange

8673 - 1448 = 7225

$$\begin{array}{r} {}^{6}\not{8}{}^{1}73 \\ -\ 1448 \\ \hline 7225 \end{array}$$

Starting with the ones, subtract each column in turn.

When subtracting 3 ones – 8 ones, exchange 1 hundred to make 13 tens – 8 tens. Don't forget to take this from the hundreds in the next calculation.

### 2 Exchanges +

3204 - 2652 = 552

$$\begin{array}{r} {}^{2}3{}^{11}\not{2}04 \\ -\ 2652 \\ \hline 552 \end{array}$$

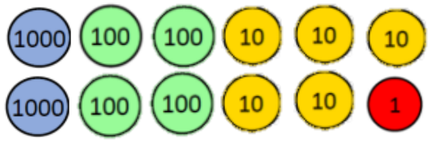
Starting with the ones, subtract each column in turn.

Exchange tens, hundreds, thousands as needed.

Don't forget to subtract the exchanged number from the next calculation.

## Add and Subtract 1, 10, 100, 1000/ Rounding and Checking

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




The number 2451 is shown.

Add 2 thousands = 4451 Subtract 3 hundreds = 2151

Add 4 tens = 2491 Subtract 1 one = 2450

When crossing tens, hundreds or thousands, more than one digit will change, e.g.

2451 + 6 tens = 2511 2451 – 5 hundreds = 1951

### Rounding

1451 + 392 = 1,843

To the nearest ten – 1450 + 390 = 1,840

To the nearest hundred – 1500 + 400 = 1,900

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

### Checking

3564 - 748 = 2,816

We can check this with the inverse:

2,816 + 748 = 3564

## Key Vocabulary

Estimate | Sum | Add | Subtract | Altogether | Difference | Exchange | Column Method | Number Line | Number Bond | Inverse