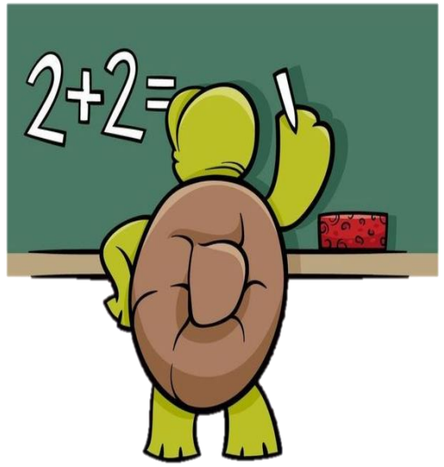
ADDITION and SUBTRACTION KNOWLEDGE ORGANISER

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

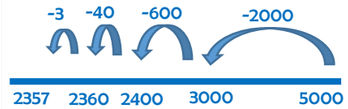
3868 - 2227 = 1641

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

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

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

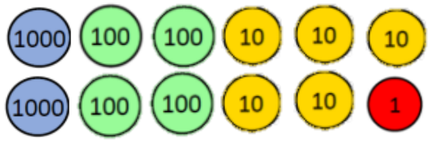
Starting with the ones, subtract each column in turn.

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