

Oak Tree Primary School



A Guide to Calculations in Year 4

Year 4 Calculation Methods

Addition (Mental / most efficient strategy)

Children need to choose the most efficient method for the calculation. Below are four strategies they may use.

1. Round and Adjust

Eg. $39 + 40 =$

Round - $40 + 40 = 80$

Adjust - $80 - 1 = 79$

2. Partitioning

Eg. $72 + 71 + 75$

$70 + 70 + 70 (70 \times 3) = 210$

$2 + 1 + 5 = 8$

$210 + 8 = 218$

3. Double and Adjust

Eg. $12 + 11$

Double 12 = 24

Adjust $24 - 1 = 23$

4. Using Number Bonds

Eg. $23 + 45 + 37$

Re-order $23 + 37 = 60$

$60 + 45 = 105$

Addition (written) - Formal column method

1. Set out the calculation in columns, ensuring that all thousands, hundreds, tens and ones digits are lined up correctly. The use of Th H T O column headings may be helpful.
2. Starting with the Ones column, add the digits together and write the answer underneath. If the answer is larger than 9, the digit in the ones column goes in the answer box and the tens digit needs to be carried over under the next column to the left.

$$\begin{array}{r} 7 \ 8 \ 9 \\ + 6 \ 4 \ 2 \\ \hline \ 1 \\ \hline 1 \end{array}$$

3. Move onto adding the digits in the next column to the left, but don't forget to add on the amount that has been carried over.

$$\begin{array}{r} 7 \ 8 \ 9 \\ + 6 \ 4 \ 2 \\ \hline \ 3 \ 1 \\ \hline 1 \ 1 \end{array}$$

4. Continue this process until all columns have been added. When adding the final column, the entire number should be placed in the answer box.

$$\begin{array}{r} 7 \ 8 \ 9 \\ + 6 \ 4 \ 2 \\ \hline 1 \ 4 \ 3 \ 1 \\ \hline 1 \ 1 \end{array}$$

Subtraction (Mental / most efficient strategy)

Children need to choose the most efficient method for the calculation. Below are strategies they may use.

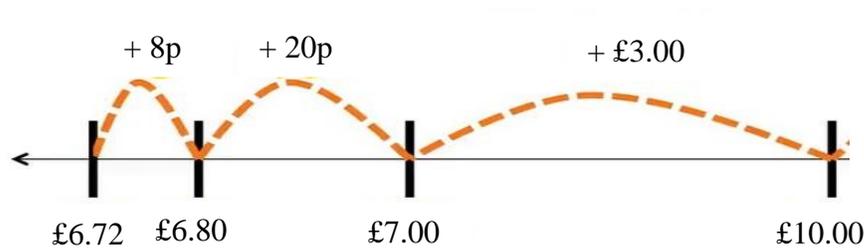
1. When taking away a small number (mental)

Eg. $105 - 7$

$$105 - 5 - 2 = 98$$

2. When subtracting from a multiple of 10, such as money (counting up)

Eg. $£10.00 - £6.72$



Multiplication (written) - Short multiplication

Fluency of times tables is essential as it underpins the following method.

1. Set out the calculation as shown below.

Eg. 342×7

$$\begin{array}{r} 342 \\ \times \quad 7 \\ \hline \end{array}$$

2. Multiply the 7 by the number in the Ones column. If the answer is a 2-digit number, the ones will go underneath the ones column and the tens will be carried over underneath the line in the tens column.

$$\begin{array}{r} 342 \\ \times \quad 7 \\ \hline 4 \\ \hline 1 \end{array}$$

3. Multiply the 7 by the number in the tens column. With this answer, don't forget to add on the number carried underneath the line.

$$\begin{array}{r} 342 \\ \times \quad 7 \\ \hline 94 \\ \hline 21 \end{array}$$

4. Continue this process until all columns have been multiplied.

$$\begin{array}{r} 342 \\ \times \quad 7 \\ \hline 2394 \\ \hline 21 \end{array}$$

Short Division (Bus Stop)

1. Set out the calculation as shown below.

Eg. $432 \div 5$

$$\begin{array}{r} 5 \overline{) 432} \end{array}$$

2. Decide how many 5s fit into 4. Write the answer directly above.

$$\begin{array}{r} 0 \\ 5 \overline{) 432} \end{array}$$

3. The 4 in the hundreds column now needs to be moved over to the tens column to create the new number 43.

$$\begin{array}{r} 0 \\ 5 \overline{) 432} \end{array}$$

4. Decide how many 5s fit into 43. Write the answer directly above. The remainder needs to be written in front of the next digit to the right.

5. Decide how

$$\begin{array}{r} 08 \\ 5 \overline{) 432} \end{array}$$

many 5s

fit into 32. Write the answer directly above and any remainder will be written to the side of it.

$$\begin{array}{r} 086 \text{ r} 2 \\ 5 \overline{) 432} \end{array}$$

Note: When multiplying and dividing by 10 and 100 (including decimals) the above methods are not appropriate.

Numbers should be moved to the left when multiplying and to the right when dividing. Move once for 10 and move twice for 100.

Eg. 6×10

T O t h

	6	.	
6	0	.	

← $\times 10$