



**Rationale:** - Pupils will be taught to calculate quickly and accurately using one secure approach in all mathematics work in school; it is our belief that children should be confident in accurate computation. This knowledge and ability provides a secure basis upon which to develop skills and understanding which are also extended through the teaching and use of mental calculation strategies. 'Chunking' (where division is seen as repeated subtraction) is used as a mental calculation strategy. Knowledge of times tables facts is essential. Dividing by 10, 100 and 1000 is a mental method and *some children* will be taught to 'cancel' zeros.

We start noting remainders and later convert these into decimal answers.

## Short Division

Say aloud: 3 divided by 4 doesn't go, carry the three (which we know is 30). 36 divided by 4 goes 9 times, place the 9 above the 6.

### Step 1

$$\begin{array}{r}
 9 \\
 4 \overline{) 36} \\
 \underline{36} \\
 0
 \end{array}
 \quad
 \begin{array}{r}
 24 \text{ r}1 \\
 7 \overline{) 169} \\
 \underline{14} \\
 29
 \end{array}
 \quad
 \begin{array}{r}
 404 \text{ r}1 \\
 2 \overline{) 809} \\
 \underline{80} \\
 9
 \end{array}
 \quad
 \begin{array}{r}
 404.5 \\
 2 \overline{) 809.10} \\
 \underline{808} \\
 10 \\
 \underline{10} \\
 0
 \end{array}$$

## Long Division

To calculate 748 divided by 51:

$$51 \overline{) 748}$$

We work out 74 divided by 51, and write the answer (1) above the 4.

$$\begin{array}{r}
 1 \\
 51 \overline{) 748} \\
 \underline{-51} \\
 23
 \end{array}$$

$1 \times 51 = 51$ , so we write this underneath 74.

Subtract 51 from 74 to get the remainder (23).

$$\begin{array}{r}
 1 \\
 51 \overline{) 748} \\
 \underline{-51} \\
 238
 \end{array}$$

We now **bring down** the next digit (8) and write it on the end of the 23.

$$\begin{array}{r}
 14 \\
 51 \overline{) 748} \\
 \underline{-51} \\
 238 \\
 \underline{-204} \\
 34
 \end{array}$$

We now work out 238 divided by 51, and write the answer (4) above the 8. You use estimation skills here: 51 is roughly 50 and  $4 \times 50 = 200$ .

You can work out  $51 \times 4 = 204$  separately.

We write 204 underneath the 238 and subtract to find the remainder.

There are no more digits to bring down and 51 cannot go into 34, so we have our answer: **14 remainder 34.**

In long division of decimals by an integer, the point remains in place and should be kept in line. Children who struggle with times tables may need to jot down repeated additions in the margin (in fact, this jotting can prove useful for many children).