

# Written Division Policy

(encourage children to estimate answers and reinforce links with multiplication times table throughout and remainders.)

1. Sharing equally into groups using practical methods and apparatus.

2. Halving amounts

'split the 6 marbles into 2 equal groups'

3. Drawing pictures of groups to go with a question.

'Share 6 sweets equally between 3 people'

4. Finding doubles/halves of numbers to 10 then to 20.

5. Multiplication is the inverse of division

'how many 2s are there in 20?'

$$\begin{array}{l} 20 \div 2 = 10 \quad \text{is equal to} \\ 10 \times 2 = 20 \end{array}$$

6. Division as arrays.

7. Start to write division questions down as number sentence.

8. 'Short division' T~U only. -Make sure that the column headings(T~U ) are used.

Use of this method is for when the numbers are a long way out of the times tables.

$$\begin{array}{r} 81 \div 3 = 27 = \\ \begin{array}{cc} \text{T} & \text{U} \\ 2 & 7 \\ \hline 3 \overline{) 81} & 1 \end{array} \end{array}$$

"How many 3s go into 8? 2. but I have 2 left over so I put the 2 in the tens answer column and the 2 tens left over I convert into units- this now make 21.

How many 3 s go into 21? 7 with non left over.

So my answer to  $81 \div 3 = 27$ ."

9. Extend short division to H~T~U using the same method.

$$180 \div 3 =$$

H    T    U

$$\begin{array}{r} 60 \\ 3 \overline{) 180} \\ \underline{18} \phantom{0} \\ 0 \end{array}$$

"How many 3s go into 1 Hundred column? 0. so I convert the 1 Hundred into ten in the tens column now making it 18 tens.

How many 3s go into 18? 6

10. 'Chunking' or long division. - Taking away several chunks when T~U  $\div$  T~U

$$75 \div 15 =$$

$$\begin{array}{r} 5 \\ 15 \overline{) 75} \\ \underline{15} \phantom{0} \longrightarrow 1 \\ 60 \\ \underline{15} \phantom{0} \longrightarrow 1 \\ 45 \\ \underline{15} \phantom{0} \longrightarrow 1 \\ 30 \\ \underline{15} \phantom{0} \longrightarrow 1 \\ 15 \phantom{0} \longrightarrow 1 \\ \underline{15} \\ 0 \end{array}$$

I have taken away 5 chunks of 15 away from 75 so my answer to  $75 \div 15 = 5$

11. Chunking/ long division using H~T~U as above **and** making an estimate then reduce the number of steps to make the method more efficient.

$$175 \div 15 =$$

$$\begin{array}{r} 11 \text{ r } 10 \\ 15 \overline{) 175} \\ \underline{150} \longrightarrow 10 \\ 25 \\ \underline{15} \longrightarrow 1 \\ 10 \end{array}$$

I have chunked together the fact that I know 15 goes into 150 10 times. I am then left with 25. I know that 15 goes into 25 once And that I am left with 10 remaining.

12. Use of calculators for division of decimals and larger numbers.