

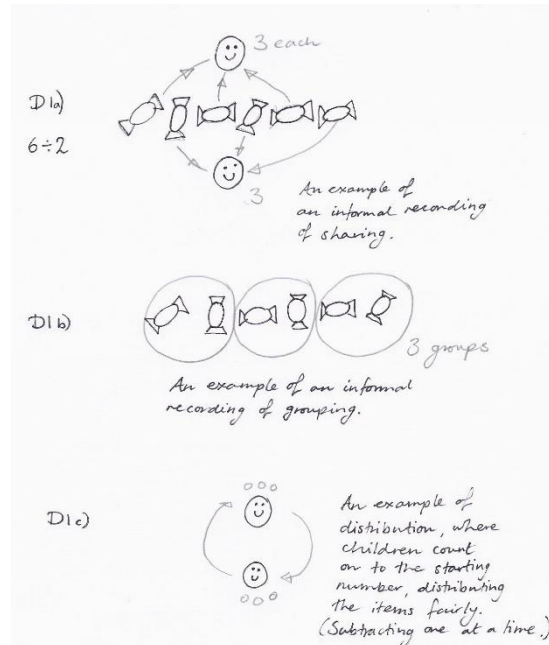
## Division

### Year R (EYFS)

Children begin to explore the idea of division by sharing objects into groups. Where possible, get the children to share into equal groups as this is a key point for division.

### Year 1

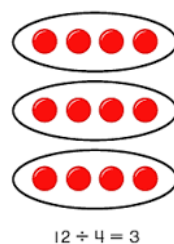
Children will  
practical contexts.  
pictorially and  
groups into arrays



continue to share equally in  
They will record this  
with begin to sort shared  
with adult support.

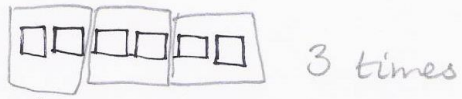
### Year 2

In Year 2 the children will write division calculations using the symbols " $\div$ " and " $=$ ". They will come to understand that division cannot be done in any order. They will explore division practically by sharing objects and then move on to using arrays.

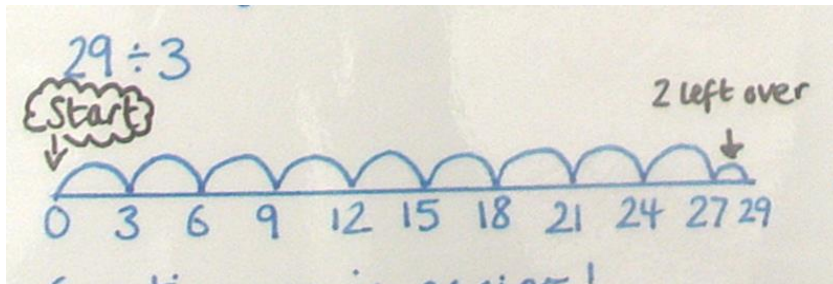


The children will then move on to think of division as repeated subtraction. Again a number line may be used here.

D2)



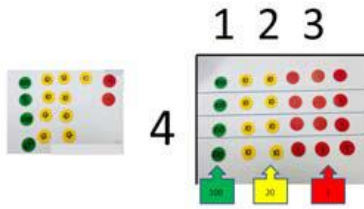
Take away 2. 4 left.  
Take away 2 more. 2 left.  
Take away 2 more. 0 left.  
We had to do it 3 times.  
( $3 \times 2 = 6$ )



### Year 3

Children start to learn the short division method. Initially this should be without remainders. Place value counters and dienes can continue to be used to support understanding of the processes involved in the formal method.

Short division using counters



98 ÷ 7 becomes

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \\ \underline{7} \phantom{0} \\ 20 \phantom{0} \\ \underline{20} \\ 0 \end{array}$$

Answer: 14

432 ÷ 5 becomes

$$\begin{array}{r} 86 \text{ r}2 \\ 5 \overline{) 432} \\ \underline{5} \phantom{0} \phantom{0} \\ 30 \phantom{0} \\ \underline{30} \phantom{0} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

Answer: 86 remainder 2

496 ÷ 11 becomes

$$\begin{array}{r} 45 \text{ r}1 \\ 11 \overline{) 496} \\ \underline{44} \phantom{0} \\ 50 \phantom{0} \\ \underline{55} \\ 50 \\ \underline{55} \\ 5 \end{array}$$

Answer:  $45 \frac{1}{11}$

### Year 4

Children continue to consolidate use of short division. They begin to solve problems involving remainders. When dividing by 10, 100 and 1000 to convert between units of measure the children should apply their understanding of place value and make use of place value charts.

### Year 5

Children continue to consolidate use of short division. They interpret remainders appropriately for the context (as integers, fractions and decimals). When dividing by 10, 100 and 1000 to convert between units of measure the children should apply their understanding of place value and make use of place value charts. If appropriate for the cohort, long division can also be introduced. This might be through the use of chunking or the alternative method also shown below.

i) 
$$\begin{array}{r} 122 \\ 8 \overline{) 976} \\ \underline{8} \phantom{0} \\ 17 \phantom{0} \\ \underline{16} \phantom{0} \\ 10 \phantom{0} \\ \underline{8} \phantom{0} \\ 20 \\ \underline{16} \\ 4 \end{array} \quad 976 \div 8 = 122$$

ii) 
$$\begin{array}{r} 121.75 \\ 8 \overline{) 974.00} \\ \underline{8} \phantom{0} \phantom{0} \\ 17 \phantom{0} \phantom{0} \\ \underline{16} \phantom{0} \phantom{0} \\ 10 \phantom{0} \phantom{0} \\ \underline{8} \phantom{0} \phantom{0} \\ 20 \phantom{0} \\ \underline{16} \phantom{0} \\ 40 \\ \underline{40} \\ 0 \end{array} \quad 974 \div 8 = 121.75$$

*Short method (which most parents may be familiar with).*

## Chunking

$$\begin{array}{r} 974 \div 8 \\ 8 \overline{) 974} \\ \underline{-800} \\ 174 \\ \underline{-160} \\ 14 \\ \underline{-8} \\ 6 \end{array} \quad \begin{array}{l} (= 8 \times 100) \\ (= 8 \times 20) \\ (= 8 \times 1) \end{array}$$

This method is a bridge between chunking and standard methods.

Answer may be recorded as  $121 \text{ r}6$   
or  $121 \frac{6}{8} = 121 \frac{3}{4}$   
or  $121.75$

## Alternative long division method

$$974 \div 8 = 121 \text{ r}6$$

$$\begin{array}{r} 121 \\ 8 \overline{) 974} \\ \underline{-8} \\ 17 \\ \underline{-16} \\ 14 \\ \underline{-8} \\ 6 \end{array} \quad \text{Long division}$$

## Year 6

In year 6 the children will use long division methods which may have been introduced in Year 5.