

Calculation Policy

Division

Stage 1

Early practical activities of grouping and sharing: children are expected to experience the concept of sharing and its associated vocabulary through **practical activities and discussions**

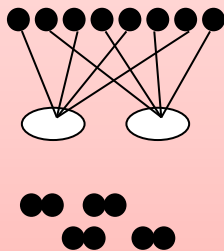
Activities might include:

- Sharing of milk at break time
- Sharing sweets on a child's birthday
- Counting in tens/twos
- Separating a given number of objects into two groups (addition and subtraction objective in reception being preliminary to multiplication and division) – halving

Stage 2

Understand the operation of division as sharing equally.

For example, 8 apples are shared equally between 2 children. How many apples does each child get?

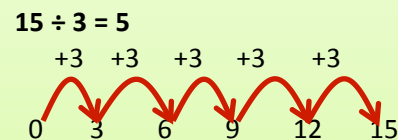


Understand the operation of division as grouping. Grouping: 8 grouped into 2's.

Stage 3

Counting in steps of given numbers until we reach our target

e.g. Count in 3s until you get to 15 (Inverse of multiplication) – use of number lines and fingers – selection of practical resources –



Stage 4

Relate multiplication tables with their division facts:

e.g. $4 \times 6 = 24$ $6 \times 4 = 24$

$24 \div 6 = 4$ $24 \div 4 = 6$

Stage 6

Short division (bus stop method – **no** carrying remainders)

$84 \div 4$ becomes

$$\begin{array}{r} 21 \\ 4 \overline{) 84} \\ \underline{8} \\ 0 \end{array}$$

Answer: 21

$639 \div 3$ becomes

$$\begin{array}{r} 213 \\ 3 \overline{) 639} \\ \underline{6} \\ 0 \\ 9 \\ \underline{9} \\ 0 \end{array}$$

Answer: 213

Stage 7

Short division (bus stop method – **with** carrying remainders)

$60 \div 4$ becomes

$$\begin{array}{r} 15 \\ 4 \overline{) 60} \\ \underline{4} \\ 20 \\ \underline{20} \\ 0 \end{array}$$

Answer: 15

$430 \div 5$ becomes

$$\begin{array}{r} 86 \\ 5 \overline{) 430} \\ \underline{4} \\ 30 \\ \underline{30} \\ 0 \end{array}$$

Answer: 86

Stage 8

Short division extended (bus stop method – **with** carrying remainders, final remainders - also shown as fractions)

$62 \div 4$ becomes

$$\begin{array}{r} 15 \text{ r} 2 \\ 4 \overline{) 62} \\ \underline{4} \\ 20 \\ \underline{20} \\ 2 \end{array}$$

Answer: 15 r 2
or $15 \frac{2}{4}$

$433 \div 5$ becomes

$$\begin{array}{r} 86 \text{ r} 3 \\ 5 \overline{) 433} \\ \underline{4} \\ 30 \\ \underline{30} \\ 3 \end{array}$$

Answer: 86 r 3
or $86 \frac{3}{5}$

Stage 5

Extend to the use of times tables to find remainders

e.g. $23 \div 5 = 4 \text{ r} 3$ ($4 \times 5 = 20$, 3 left over)

$25 \div 4 = 6 \text{ r} 1$ ($6 \times 4 = 24$, 1 left over)

Stage 9

Bus stop method with decimals

$63 \div 4$ becomes

$$\begin{array}{r} 15.75 \\ 4 \overline{) 63.00} \\ \underline{4} \\ 20 \\ \underline{20} \\ 00 \\ \underline{0} \\ 00 \\ \underline{0} \\ 00 \\ \underline{0} \\ 00 \end{array}$$

Decimal points must be lined up

Stage 10

Long division – toolbox created to make working out easier

$432 \div 15$ becomes

$$\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{30} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

OR

$$\begin{array}{r} 28.8 \\ 15 \overline{) 432.0} \\ \underline{30} \\ 132 \\ \underline{120} \\ 120 \\ \underline{120} \\ 0 \end{array}$$

Toolbox

- 15
- 30
- 45
- 60
- 75
- 90
- 105
- 120
- 135