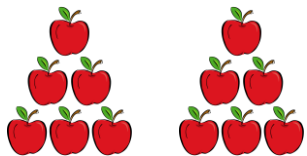


Multiplication overview

Counting and doubling

Double a number up to 10; counting in 2s, 5s and 10s up to 20 using number songs and concrete and/or pictorial methods

Example:

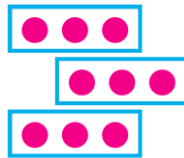


Repeated addition

Converting the sum from a multiplication to an addition sum by adding the number to itself the number of times it is to be multiplied.

Example:

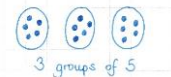
$$3 \times 3 = \\ 3 + 3 + 3 =$$



Arrays

Using dots children mark out the sum using small dots to represent each one, ten or hundred.

$$5 + 5 + 5 = 15 \\ 3 \times 5 = 15$$



Grid method

The numbers are partitioned and each part to be multiplied separately. The products are then added to find the total product.

Example:

$$\begin{array}{|c|c|c|c|} \hline \times & 40 & 6 & \\ \hline 3 & 120 & 18 & \\ \hline \end{array}$$

$$\begin{array}{r} 120 \\ + 18 \\ \hline 138 \end{array}$$

| | | |
|-----|---|------|
| | x | 6 |
| 500 | | 3000 |
| 40 | | 240 |
| 9 | | 54 |
| | | 3294 |

Short multiplication

Used for multiplying by a one digit number. Lay out the numbers in the H,T,U columns with the largest number at the top.

Example:

$$\begin{array}{r} 46 \\ \times 3 \\ \hline 138 \end{array}$$

$$\begin{array}{r} 473 \\ \times 6 \\ \hline 2838 \end{array}$$

Long multiplication

Used for multiplying by numbers larger than 1 digit. Same layout as short multiplication. Multiply by the ones then the tens etc.

Example:

$$\begin{array}{r} 372 \\ \times 54 \\ \hline 1488 \\ 18600 \\ \hline 20088 \end{array}$$