

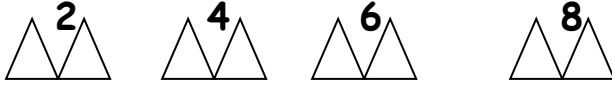


St Bernadette Calculation Policy 2021

Multiplication

Step 1

Children will experience equal groups of objects and will count in 2s and 10s and begin to count in 5s. They will work on practical problem solving activities involving equal sets or groups.



Step 2

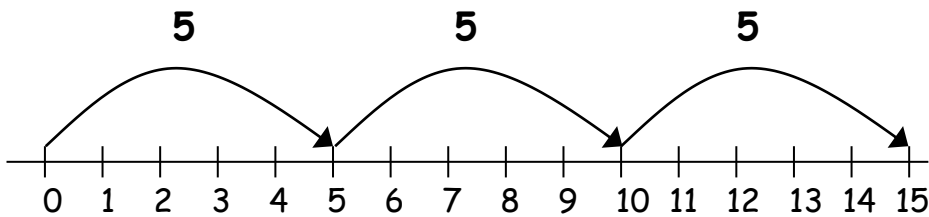
Repeated addition

Children will develop their understanding of multiplication and use jottings to support calculation.

3 times 5 is $5 + 5 + 5 = 15$ or 3 lots of 5 or 5×3

Also on a number line.

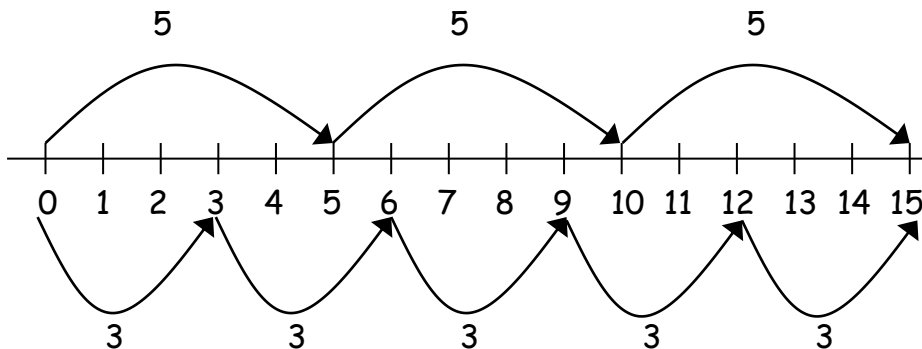
$$5 \times 3 = 5 + 5 + 5$$



Step 3

Commutative

Children should know that 3×5 has the same answer as 5×3 . This can also be shown on the number line.



Step 4

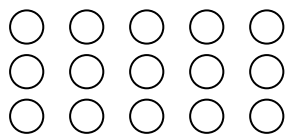


St Bernadette Calculation Policy 2021

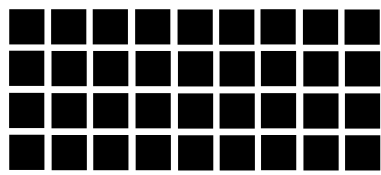
Multiplication

Arrays

Children should be able to model a multiplication calculation using an array.
This knowledge will support with the development of the grid method.



○ ○ ○ ○ ○ $5 \times 3 = 15$
○ ○ ○ ○ ○
○ ○ ○ ○ ○
 $3 \times 5 = 15$



■ ■ ■ ■ ■ ■ ■ ■ ■ ■ $9 \times 4 = 36$
■ ■ ■ ■ ■ ■ ■ ■ ■ ■
■ ■ ■ ■ ■ ■ ■ ■ ■ ■
■ ■ ■ ■ ■ ■ ■ ■ ■ ■
 $9 \times 4 = 36$

Step 5

Using symbols to stand for unknown numbers to complete equations using inverse operations

$$\square \times 5 = 20$$

$$3 \times \triangle = 18$$

$$\square \times \circ = 32$$

Step 6

Partitioning

$$\begin{aligned} 38 \times 5 &= (30 \times 5) + (8 \times 5) \\ &= 150 + 40 \\ &= 190 \end{aligned}$$

Step 7



St Bernadette Calculation Policy 2021

Multiplication

TU x U

(Short multiplication - multiplication by a single digit)

$$\begin{array}{r} 22 \\ \times 3 \\ \hline 66 \end{array}$$

$$\begin{array}{r} 43 \\ \times 5 \\ \hline 215 \\ 1 \end{array}$$

Step 8

HTU x U

(Short multiplication - multiplication by a single digit)

$$\begin{array}{r} 326 \\ \times 3 \\ \hline 978 \\ 1 \end{array}$$

TU x TU

(Long multiplication & multiplication by more than a single digit)

$$72 \times 38$$

$$\begin{array}{r} 72 \\ \times 38 \\ \hline 576 \\ 2160 \\ \hline 2736 \\ 1 \end{array}$$

Step 9

Multiplication of decimals

e.g. 4.9×3

$$\begin{array}{r} 4.9 \\ \times 3 \\ \hline 14.7 \\ 2 \end{array}$$

Step 10



St Bernadette Calculation Policy 2021
Multiplication

HTU x TU

(Long multiplication s multiplication by more than a single digit)

e.g 372 x 24

$$\begin{array}{r} 372 \\ \times 24 \\ \hline 1488 \\ 7440 \\ \hline 8928 \\ 1 \end{array}$$

Step 11

Multiplication of decimals (2d.p)

For example:

4.92 x 3

$$\begin{array}{r} 4.92 \\ \times 3 \\ \hline 14.76 \\ 2 \end{array}$$