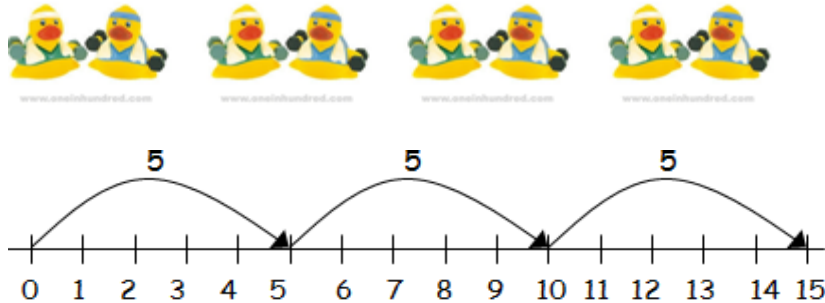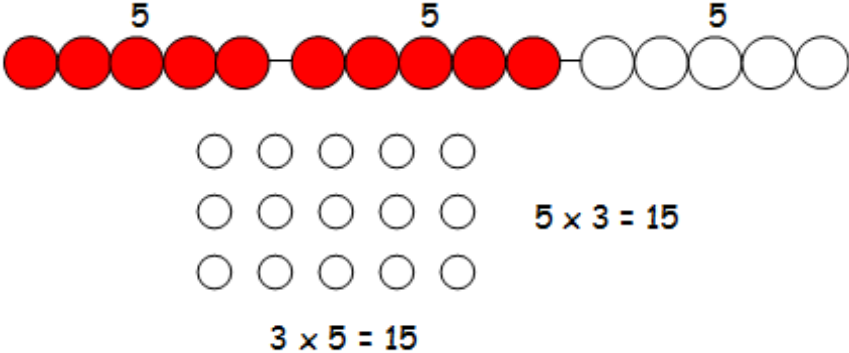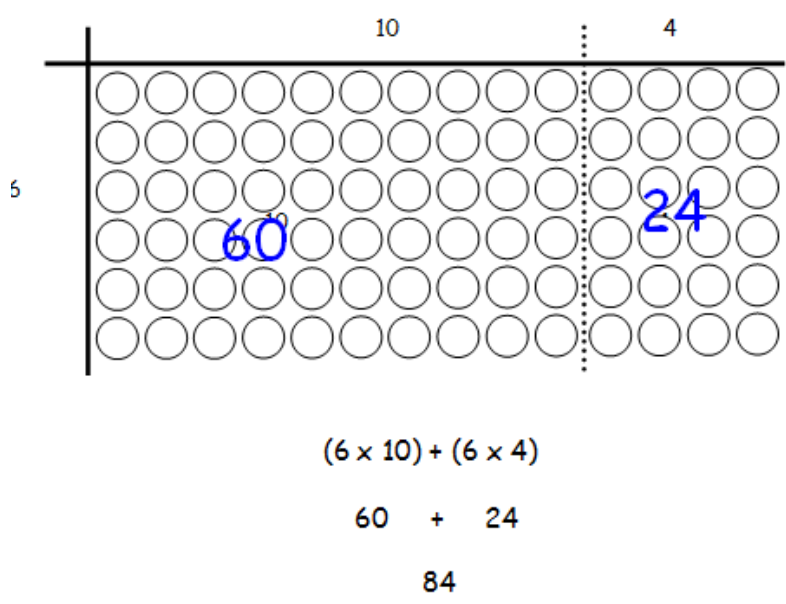# Progression in Calculations – Multiplication

Mental Calculations: *Children's mental recall is the building blocks of all number work. These are developed from foundation stage and continue throughout the school. Moves to written methods do not replace the need to teach and revisit mental strategies.*

https://www.ncetm.org.uk/resources/40530

This link takes you to videos explaining a range of strategies in our progression document.

Year Group	Expectations	Models, Images and Links
1	• Use concrete objects, pictorial representations and arrays to count in 2s, 5s and 10s	
2	• Recall and use 2x, 5x and 10x table • Calculate using and understanding the signs x and = • Understand that multiplication is commutative • Understand that multiplication is the inverse of division	 5 x 3 = 15 3 x 5 = 15 https://www.youtube.com/watch?v=VhpUt0vXI4w

3	• Recall and use 3x, 4x and 8x tables • Continue to use 2x, 5x and 10x tables • Calculate mentally using the tables they know • Begin to multiply 1 digit by 2 digit numbers using apparatus • Move towards using the grid method	
4	• Continue to use 2x, 3x, 4x, 5x, 8x, and 10x table • Recall and use 6x, 7x and 9x table • Use known facts to multiply mentally including by 0 and 1 • Multiply three numbers together e.g. 6x4x3 = • Recognise and use factor pairs • Use the grid method to multiply 2 and 3 digit numbers by a 1 digit number	 $(6 \times 10) + (6 \times 4)$ 60 + 24 84

| 5 | Recall and use all tables to 12x12 Identify multiples, factors and common factors Understand prime numbers; establish whether a number up to 100 is prime and recall all prime numbers to 19 Multiply 4 digit numbers by 1 or 2 digit numbers moving from grid method to long multiplication Multiply whole numbers and those involving decimals by 10, 100 and 1000 | 124 × 26 becomes

$$\begin{array}{r} 12 \\ 124 \\ \times26 \\ \hline 744 \\ 2480 \\ \hline 3224 \\ \hline 11 \end{array}$$

Answer: 3224 |
| 6 | Multiply a 4 digit by a 2 digit number using long multiplication Identify common factors, common multiples and prime numbers Understand and use BIDMAS | |

Vocabulary for Multiplication

Lots of
Groups of
Times
Multiply
Multiplied by
Once, twice, three time…….
Times table
Double
Inverse
Product
Prime
Factor
multiple