
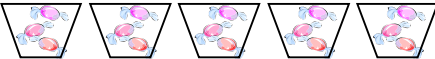
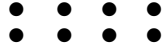
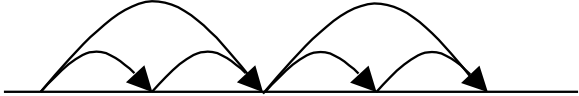


# Big Maths

## Written Methods for Multiplication.

Level 1	Level 2
<p><b><u>Counting using a variety of practical resources</u></b>            Counting in 2s e.g. counting socks, shoes, animal's legs...            Counting in 5s e.g. counting fingers, fingers in gloves, toes...            Counting in 10s e.g. fingers, toes...</p> <p><b><u>Activities</u></b>            Children will use objects and set them out into groups or 'lots'. Eg. Set out 1 lot of 3 cubes, 2 lots of 3 cubes.</p> <p>2 lots of 2 strawberries:</p>   = 5 'lots' of 3 sweets = 15 sweets.	<p>This will then be extended to setting out groups of dots. Eg. 3 lots of 3 dots. Children be encouraged to check that they have the correct number of dots in each 'lot' and will then be asked to count up all of the 'lots' to find the total.</p> <p>Children will be taught that a lot = X. So 3 lots of 4 = 3 X 4.</p> <p><b><u>Arrays and repeated addition</u></b></p> <div style="display: flex; align-items: center; margin-bottom: 20px;"> <div style="text-align: center; margin-right: 10px;">  </div> <div> <math>4 \times 2</math> or <math>4 + 4</math>  <math>2 \times 4</math> or <math>2 + 2 + 2 + 2</math> </div> </div> <div style="text-align: center; margin-bottom: 20px;">  </div> <p><b><u>Children will:</u></b></p> <ol style="list-style-type: none"> <li>1. Find out which number needs to be added</li> <li>2. Find out how many times to add it</li> <li>3. Write it out as an addition number sentence eg. <math>2+2+2+2 = 8</math></li> </ol> <p>This is the same as <math>4 \times 2 = 8</math></p>
Level 3	Level 4

Children will use their Learn Its and a multiplication square to help them understand the concept of times tables – instant recall of 2, 3, 4 and 5 times tables will be necessary.

**Smile Multiplication**

Eg.  $4 \times 20 = 80$



8 and 1 zero

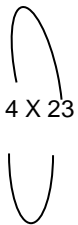
Eg.  $40 \times 20 = 800$



8 and 2 zeros

Smile multiplication leads into partitioning which will lead into using a grid for multiplication.

$4 \times 23 = 4 \times 20$  and  $4 \times 3$



$4 \times 23$

	X	20	3
4			

Solving 1d X 2d or 3d multiplication by writing out the different questions required.

Eg.

$6 \times 725 =$

$6 \times 700$

$6 \times 20$

$6 \times 5$

This will be in a list and then written onto a grid. Children should add together the answers.

	X	700	20	5
6		4200	120	30

$4200$   
 $120$   
 $30 +$

This method will then be extended to 2d X 2d numbers and 3 d x 2d numbers. It will also be used to multiply number with decimals.

When children are multiplying with decimals, they will be taught to work out their answers using their times tables knowledge and make the answers 10 or 100 times smaller.