

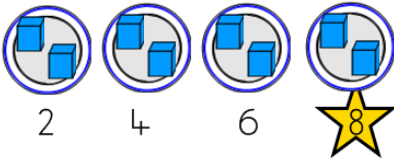
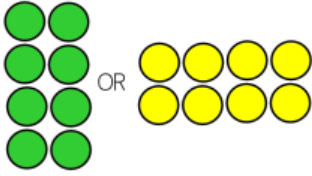
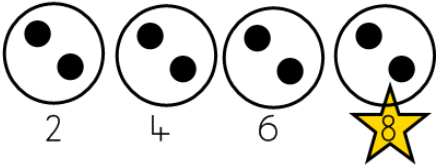
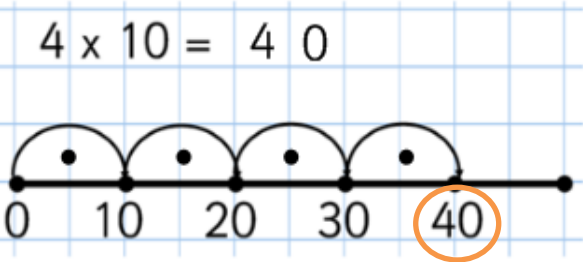
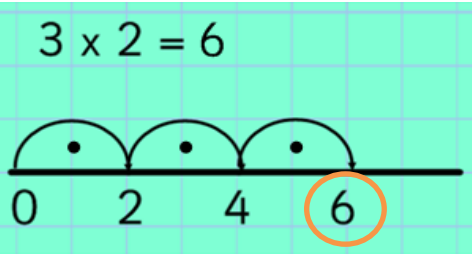


# Multiplication



Year Group	Recording	Rapid Recall	Mental Calculation
<b>Nursery Reception</b>	<p>Practically Without number sentence</p>  <p>Without number sentence <math>4 \times 2 = 8</math></p> <p>"2, 4, 6, 8" </p>	Count in groups of 2's, 10's and 5's	
<b>Year 1</b>	<p>Solve one-step problems using concrete objects, pictorial representations and arrays.</p> <p>Practically <math>4 \times 2 = 8</math></p>  <p>Arrays</p>  <p>Drawing using symbols <math>4 \times 2 = 8</math></p>  <p><math>3 \times 10 = 30</math></p> <p><b><math>10 + 10 + 10</math></b></p> <p>Guided number line</p>  <p>Draw own number line</p> 	Begin to recall multiplication facts for the 2, 5 and 10 times tables	

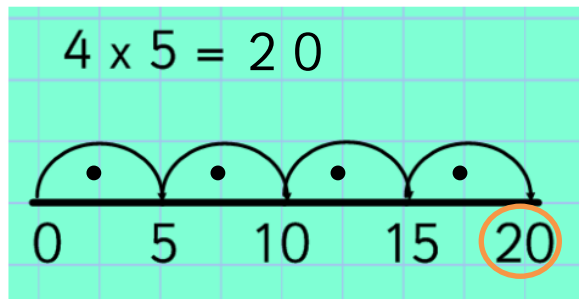
## Multiplication



### Year 2

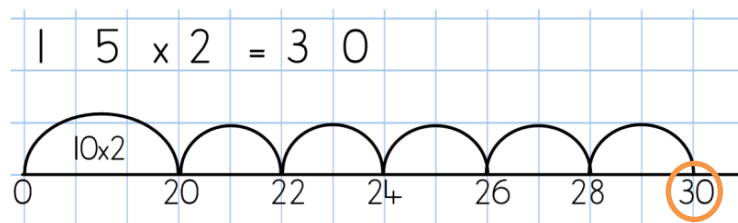
Solve problems in context.  
Use the inverse operation to check calculations and solve missing number problems.

Draw own number line



Count jumps and dot to check

Number line for  $10 \times 0$  (group 10's)



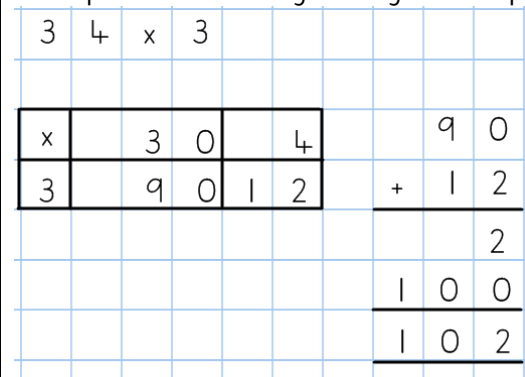
Recall of facts for 2, 5, 10

Recall of doubles where ones total less than 10.

Calculate mathematical statements for multiplication (*using repeated addition*) and division, e.g.  
 $3 \times 10 =$   
 $10 + 10 + 10$

### Year 3

Estimate the answer to a calculation and use inverse operations to check calculations  
Use the grid method for  $10 \times 0$   
Solve problems including missing number problems



Count from 0 in multiples of 4, 8, 50 and 100

Recall multiplication facts for the 3, 4 and 8 multiplication tables

Use multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods e.g.  $15 \times 2 = 30$   
 $(10 \times 2) + (5 \times 2)$

# Multiplication



<p><b>Year 4</b></p>	<p>Use the expanded written method for TO x O and HTO x O leading to the short written method Solve addition two-step problems in contexts, deciding which operations and methods to use.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math display="block">\begin{array}{r} 234 \\ \times \quad 3 \\ \hline 12 \quad (4 \times 3) \\ 90 \quad (30 \times 3) \\ \hline 600 \quad (200 \times 3) \\ \hline 702 \\ \hline \end{array}</math> </div> <div style="text-align: center;"> <math display="block">\begin{array}{r} 234 \\ \times \quad 3 \\ \hline 12 \\ 90 \\ \hline 600 \\ \hline 702 \\ \hline \end{array}</math> </div> <div style="text-align: center;"> <math display="block">\begin{array}{r} 234 \\ \times \quad 3 \\ \hline 702 \\ \hline \end{array}</math> </div> </div> <div style="text-align: center; margin-top: 10px;"> </div>	<p>Count in multiples of 6, 7, 9, 25 and 1000</p> <p>Recall up to 12 x 12</p>	<p>Derive facts e.g. <math>200 \times 3 = 600</math> using <math>2 \times 3 = 6</math></p>
<p><b>Year 5</b></p>	<p>Use the short written method for up to 4 digits by a one digit number Use long multiplication for up to 4 digits by a 2 digit number Solve problems involving multiplication using knowledge of factors, squares and cubes Solve problems involving all 4 operations, including understanding the meaning of the equals sign including missing number problems</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math display="block">\begin{array}{r} 2234 \times 3 \\ \hline 6702 \end{array}</math> </div> <div style="text-align: center;"> <math display="block">\begin{array}{r} 2234 \times 53 \\ \hline 6702 \\ 111700 \\ \hline 118402 \end{array}</math> </div> </div> <div style="text-align: center; margin-top: 10px;"> </div>	<p>Identify multiples and factors</p> <p>Multiply whole numbers and decimals by 10, 100 and 1000</p> <p>Recall up to 12 x 12</p>	<p>Multiply using known facts</p>
<p><b>Year 6</b></p>	<p>Use the short written method multiplying by a one digit number Use long multiplication for multiplying by a 2 digit number Multiply one-digit numbers with up to 2 decimal places by whole numbers Use estimation to check answers to calculations e.g. <math>2000 \times 3 = 6000</math></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <math display="block">\begin{array}{r} 2234 \times 3 \\ \hline 6702 \end{array}</math> </div> <div style="text-align: center;"> <math display="block">\begin{array}{r} 2234 \times 53 \\ \hline 6702 \\ 111700 \\ \hline 118402 \end{array}</math> </div> </div> <div style="text-align: center; margin-top: 10px;"> </div>	<p>Recall up to 12 x 12 and division facts fluently</p> <p>Common factors, common multiples and prime numbers</p>	<p>Perform mental calculations with mixed operations and large numbers</p>