
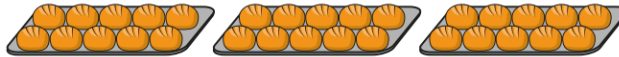




Parklands Calculation Policy – Multiplication – September 2025 (Review: Sept 2026)

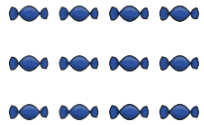
<p>Stage One: Doubling</p> <p>Key Vocabulary: double, twice as many, equal</p>	<p>Reception</p>
<p>In EYFS children learn the vocabulary around 'doubling' They use practical resources such as numicon to find 2 of a number and play games and access provision to develop their understanding of the concept.</p> <p>The children will learn that double means 'twice as many'. They should be given opportunities to build doubles using real objects and mathematical equipment. Building numbers using the pairwise patterns on 10 frames helps the children to see the doubles. Mirrors and barrier games are a fun way for children to see doubles as they build and to explore early symmetry. We encourage children to say the doubles as they build them, e.g. Double 2 is 4</p> <p>Examples:</p> <div data-bbox="94 619 761 1021"> <div> <p>Doubling</p> <p>Maths Area</p> <p>Play snap or matching pairs games using pictorial playing cards or dot cards. Encourage the children to say the doubles as they make them. The person with the most doubles or pairs of cards at the end wins the game.</p> </div> <div> <p>Enhancements to areas of learning</p> </div> <div> <p>Art Area</p> <p>Provide large paper with a fold down the middle. Encourage the children to make doubles by adding blobs of paint to one side of the paper only. Then fold the paper over to make the double. Can they predict how many blobs of paint there will be altogether if they start with 3 blobs?</p> </div> <div> <p>Outdoors</p> <p>Have number shapes hidden around the outdoor area. Give each child a number shape and ask them to find another one the same to make a double. Encourage them to say the double they have found, e.g. Double 5 is 10.</p> </div> <div> <p>Finger Gym</p> <p>Provide ladybird or butterfly templates and ask the children to use the tweezers to make doubles by adding the same number of pompoms to each side. How many different doubles can they make? Can they make one which is not a double and tell you why?</p> </div> </div> <div data-bbox="806 813 1523 1005"> </div> <p>Draw pictures to show how to double a number.</p> <p>Double 4 is 8</p> <div> </div>	<p>Children need to be able to:</p> <p>The children will learn that double means 'twice as many'. They should be given opportunities to build doubles using real objects and mathematical equipment.</p> <p>Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.</p>

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<p>Stage Two: Counting in multiples, repeated addition and arrays to show multiplication</p> <p>Key Vocabulary: multiply, multiplication, arrays multiplication tables/times tables, commutative ($4 \times 5 = 5 \times 4$), multiple repeated addition</p>	<p>Key Stage 1</p>
<p>Children begin by practically exploring counting in 2s using things that come in pairs, such as socks and wheels on a bicycle. Number lines and a 1-50 number grid are useful representations that allow children to spot patterns when counting in 2s. This should be linked back to learning from Reception around doubles. They should count both forwards and backwards in 2s, but always starting from an even number. They then progress to 10's and finally 5's. They use manipulatives to support such as numicon, cubes and base 10.</p> <p>How many socks are there in total?</p>  <p>A baker has made 3 trays of 10 bread rolls.</p>  <p>How many rolls are there in total?</p> <p>How many grapes are there?</p>  <p>Moving towards representing this as repeated addition;</p> <p>How many fish are there?</p>  <p>_____ + _____ + _____ + _____ + _____ = _____</p> <p>There are _____ fish in total.</p> <p>Then arrays for larger numbers;</p>	<p>In Y1 children need to be able to:</p> <p>Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</p> <p>Count in multiples of 2s, 5s and 10s.</p> <p>In Y2 children need to be able to:</p> <p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p>Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot</p> <p>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>

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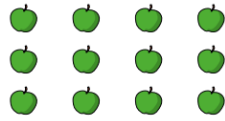
Circle each row of sweets.



How many rows are there?

There are rows.

Circle each column of apples.



How many columns are there?

There are columns.



Create arrays using counters/cubes to show multiplication sentences.



$$5+5+5 = 15$$

$$3+3+3+3+3=15$$

$$5 \times 3 = 15$$

$$3 \times 5 = 15$$

In Year 2 children are introduced to the multiplication symbol and this begins to be linked to the times tables. They use the terminology 'lots of'

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Complete the sentences for each picture.

a)

lots of = × =

Use counters to help you complete the number sentences.

a) $3 \times \square = 12$

b) $\square \times 4 = 8$

c) $2 \times \square = 10$

They draw and create arrays in different rotations to find **commutative** multiplication sentences.

$4 \times 2 = 8$

$2 \times 4 = 8$

$2 \times 4 = 8$

$4 \times 2 = 8$

Write two multiplications for the array.

× = × =

In year 2 the children look closely at the 2, 5 and 10 x tables and should begin to learn some number facts related to these.

<p>Stage Three: Multiply using written methods</p> <p>Key Vocabulary: Multiply, multiplication, partitioning, expanded written method, short method, formal method.</p>	<p>Key Stage 2</p>
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Progression in multiplication:

Y3 – Multiply using partitioning (2 digit \times 1 digit)

Y4 – Multiply using partitioning and expanded written method moving to short method (2/3 \times 1 digit)

Y5 – Multiply up to 4 digits using expanded written method moving to short method (4 \times 1 digit) (2/3/4 \times 2 digit)

Y6 – Recap all

Multiply using partitioning

Children may use manipulatives such as counters and base 10 alongside place value grids to support their learning.

There are 23 marbles in a jar.

There are 5 jars.



Tens	Ones

They learn to multiply the ones first followed by the tens then recombine by adding to find the total.

2 digit by 1 digit partitioning

$$15 \times 4 = 60$$

$$10 \times 4 = 40 +$$

$$5 \times 4 = 20$$

$$\underline{60}$$

Multiply using the expanded written method

When teaching long multiplication, we start with the expanded written method, reminding the children about lining up their numbers clearly in columns and adding up at the end. Before moving to the short method when children are secure.

In Y3 children need to be able to:

Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

In Y4 children need to be able to:

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.

Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

In Y5 children need to be able to:

Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.

In Y6 children need to be able to:

Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

We encourage children to use whichever method they feel comfortable with and slowly work towards removing the scaffolding in brackets at the side.

expanded written method

$$\begin{array}{r}
 37 \\
 \times 4 \\
 \hline
 28 \quad (7 \times 4) \\
 + 120 \quad (30 \times 4) \\
 \hline
 148
 \end{array}$$



short method

$$\begin{array}{r}
 37 \\
 \times 4 \\
 \hline
 148
 \end{array}$$

2 digit x 2 digit

$$\begin{array}{r}
 43 \\
 \times 13 \\
 \hline
 129 \quad (43 \times 3) \\
 + 430 \quad (43 \times 10) \\
 \hline
 559
 \end{array}$$

3 digit x 2 digit

$$\begin{array}{r}
 512 \\
 \times 24 \\
 \hline
 2048 \quad (512 \times 4) \\
 + 10240 \quad (512 \times 20) \\
 \hline
 12288
 \end{array}$$