

Curriculum progressionNumber: Multiplication and Division

Multiplication and Division Facts						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I know doubles of numbers within 10 so I can recall them. I know halves of the even numbers within 10 so I can recall them.	I know my 0 times table so I can recall facts. I know my 1 times table so I can recall facts. I know my 10 times table so I can recall facts	I know multiplication and division facts for 2 so I can recall them. I know multiplication and division facts for 5 so I can recall them. I know multiplication and division facts for 10 so I can recall them. I know multiplication and division facts for 3 so I can recall them.	I know multiplication and division facts for 6 so I can recall them. I know multiplication and division facts for 4 so I can recall them. I know multiplication and division facts for 8 so I can recall them.	I know multiplication and division facts for multiplication tables up to 12x12 so I can recall them.	I know multiplication and division facts for multiplication tables up to 12x12 so I can recall them.	I know multiplication and division facts for multiplication tables up to 12x12 so I can recall them.



Mental Calculations

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>I know how to double numbers within 10.</p> <p>I know how to half numbers within 10.</p>		<p>I know multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</p>		<p>I know how to use place value, known and derived facts to multiply and divide mentally including multiplying by 0 and 1 and dividing by 1, multiplying together three numbers</p> <p>I know how to use commutativity in mental calculations</p>	<p>I know how to multiply and divide numbers mentally so I can use known facts.</p>	<p>I know how to perform mental calculations including with mixed operations and large numbers</p>

**Written Methods**

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>I know the x means to multiply.</p> <p>I know () means divide.</p> <p>I know = means equals.</p>	<p>I know how to calculate mathematical statements for multiplication and division within the multiplication tables</p> <p>I know the x means to multiply.</p> <p>I know () means divide.</p> <p>I know = means equals.</p>	<p>I know how to write and calculate mathematical statements for multiplication and division using the multiplication tables that they know including two-digit numbers times one-digit numbers</p>	<p>I know how to multiply two-digit and three-digit numbers by a one-digit number using a formal written method</p>	<p>I know how 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</p> <p>I know how to divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p> <p>I know how to multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p>	<p>I know how to multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</p> <p>I know how to divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division</p> <p>I know how to interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context</p> <p>I know how to divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate interpreting</p>



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Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				I know how to recognise and use factor pairs	<p>I know how to recall multiples and factors including finding all factor pairs of a number and common factors of two numbers.</p> <p>I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</p> <p>I know how to establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>I know how to recognise and use square numbers and cube numbers and the notation for squared and cubed.</p>	I know how to identify common factors, common multiples and prime numbers

**Order of operations**

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					I know how to solve problems involving addition, subtraction, multiplication and division Understand the meaning of the equals sign	I know how to use my knowledge of the order of operations to carry out calculations involving the four operations

Inverse Operations, estimating and checking answers

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		I know how to show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		I know how to recognise and use commutativity		I know how to use estimation to check answers to calculations.



Problem Solving						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	I know how to solve one step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	I know how to solve problems involving multiplication and division using materials, arrays, repeated addition, mental methods multiplication and division facts including problems in context.	<p>I know how to solve problems including missing number problems, involving multiplication and division.</p> <p>I know how to solve positive integer scaling problems</p> <p>I know how to solve correspondence problems in which (n) objects are connected to (m) objects.</p>	<p>I know how to solve problems involving multiplying and adding including using the distributive law to multiply two-digit numbers by one digit.</p> <p>I know how to solve integer scaling problems</p> <p>I know how to solve correspondence problems such as (n) objects are connected to (m) objects.</p>	<p>I know how to solve problems involving multiplication and division including using their knowledge of factors, multiplies, squares and cubes</p> <p>I know how to solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates</p>	I know how to use estimation in the context of a problem an appropriate degree of accuracy Solve problems involving addition, subtraction, multiplication and division