Number: Multiplication and Division

MULTIPLICATION & DIVISION FACTS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
count in multiples of twos, fives and tens (copied from Number and Place Value) T3 U12	*count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward* (copied from Number and Place Value) T1 U1	*count from 0 in multiples of 4, 8, 50 and 100* (copied from Number and Place Value) T1 U1	*count in multiples of 6, 7, 9, 25 and 1 000* (copied from Number and Place Value) T1 U1 &U2	*count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000* (copied from Number and Place Value) T1 U1	
	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers T1 U5 T2 U6	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables T1 U4	recall multiplication and division facts for multiplication tables up to 12 × 12 T1 U5		
MENTAL CALCULATION					
		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 (appears also in Written Methods) T1 U4 T2 U5	use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers T1 U5 T2 U6	multiply and divide numbers mentally drawing upon known facts T2 U7	perform mental calculations, including with mixed operations and large numbers T1 U3
	show that multiplication of two numbers can be		recognise and use factor pairs and	multiply and divide whole numbers and	*associate a fraction with division and calculate decimal*

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| | done in any order (commutative) and division of one number by another cannot
T1 U5 & U6 | | commutativity in mental calculations (appears also in Properties of Numbers)
T2 U6 | those involving decimals by 10, 100 and 1000
T1 U5 | *fraction equivalents (e.g. 0.375) for a simple fraction (e.g. ³/₈)*
(copied from Fractions)
T2 U7 |

WRITTEN CALCULATION					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Non-statutory guidance: *Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities* T3 U12	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs T1 U5 T2 U6	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 (appears also in Mental Methods) T1 U4 T2 U5	multiply two-digit and three-digit numbers by a one-digit number using formal written layout T2 U6	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 T2 U7	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication T1 U2
				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	divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret

				context T2 U7	remainders as whole number remainders, fractions, or by rounding, as appropriate for the context T1 U2
					use written division methods in cases where the answer has up to two decimal places (copied from Fractions (including decimals)) T1 U5 T2 U7

PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			recognise and use factor pairs and commutativity in mental calculations (repeated) T2 U6	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. T1 U5	identify common factors, common multiples and prime numbers T1 U3
				know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers T1 U5	*use common factors to simplify fractions; use common multiples to express fractions in the same denomination* (copied from Fractions) T1 U4
				establish whether a number up to 100 is prime and recall prime numbers up to 19 T1 U5	
				recognise and use square numbers and cube	*calculate, estimate and compare volume of cubes*

				numbers, and the notation for squared (^{2}) and cubed (^{3}) T1 U5	and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3 (copied from Measures) T2 U11

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		ORDER OF OPERATIONS			
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
					use their knowledge of the order of operations to carry out calculations involving the four operations T1 U3 & U5 T3 U14 recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) Y5 T1 U3
		INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS			
		estimate the answer to a calculation and use inverse operations to check answers (copied from Addition and Subtraction) T1 U3	*estimate and use inverse operations to check answers to a calculation* (copied from Addition and Subtraction) T1 U3		use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy T3 U14

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PROBLEM SOLVING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 **T3 U12 &13**	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **T1 U5** **T2 U6**	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects **T1 U4** **T2 U5**	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 **T2 U6** Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. **T2 U6**	solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes **T1 U5**	solve problems involving addition, subtraction, multiplication and division **T1 U2 & 3** **T3 U14**
				solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign **T1 U3 & U5**	
				solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates **T1 U5**	*solve problems involving similar shapes where the scale factor is known or can be found* (copied from Ratio and Proportion) **T2 U12**