



Arithmetic Key Learning

'Working together to achieve success'

Statements taken from the National Curriculum 2014

Additional statements to support progression in learning.



Content Domain	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NUMBER and PLACE VALUE						
N1 Counting in multiples (NB: Can be used for multiplication questions in arithmetic papers).	Count in ones up to and across 100, forward and backwards, beginning with 0 or 1 or from any given number. Count in multiples of two, five and ten.	Count in steps of 2, 3 and 5, from 0, and in tens from any number, forward or backward.	Count from 0 in multiples of 4, 8, 50 and 100.	Count in multiples of 2, 4, 6, 7, 8, 9, 25, 50 and 1,000.	Count in multiples of 2, 4, 6, 7, 8, 9, 25 and all powers of 10 for any given number up to 1,000,000.	Count in multiples of 2, 4, 6, 7, 8, 9, 25 and all powers of 10 for any given number up to 1,000,000.
N2 Reading and writing numbers (NB: This is the highest value numbers that can be tested).	Count, read and write numbers to 100 in numerals. Read and write numbers from 1 to 20 in words.	Read and write numbers to at least 100 in numerals and in words.	Read and write numbers to 1,000 in numerals and in words.	Read, write, order and compare numbers beyond 1,000.	Read, write, order and compare numbers to at least 1,000,000.	Read, write, order and compare numbers to at least 10,000,000
N3 Compare and order numbers.		Compare and order numbers from 0 up to 100; using <, > and = signs.	Compare and order numbers from 0 up to 999, use <, > and = signs.			
N4 Finding 10, 100 more or less (mentally).	Identify one more and one less.		Find 10 or 100 more or less than a given number.	Find 10, 100 or 1,000 more or less than a given number.	Find 10, 100 or 1,000 more or less than a given number.	Find 10, 100 or 1,000 more or less than a given number.
N5 Place value in numbers.		Recognise the place value of each digit in a two-digit number (tens and ones).	Recognise the place value of each digit in a three-digit number (hundreds, tens and ones).	Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones).	Recognise the place value of each digit in numbers up to 1,000,000.	Recognise the place value of each digit in numbers up to 1,000,000.
N6 Negative numbers				Count backwards through zero to include negative numbers.	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	Use negative numbers in context, and calculate intervals across zero.
ADDITION and SUBTRACTION						
C KS1 1 Number bonds and known facts (addition).	Represent and use number bonds within 20.	Recall and use addition facts to 20 fluently and derive and use related facts up to 100.	Recall and use addition facts to 20 fluently, and derive and use related facts up to 100.			
C KS1 2 Number bonds and known facts (subtraction).	Represent and use number bonds and related subtraction facts within 20.	Recall and use subtraction facts to 20 fluently and derive and use related facts up to 100.	Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100.			
C1 Mental addition and subtraction.	Add and subtract one-digit and two-digit numbers to 20, including zero	Add and subtract a two-digit number and ones.	Add and subtract numbers with up to three digits and ones.	Add and subtract numbers with up to three digits and ones.	Add and subtract numbers with up to three digits and ones.	Add and subtract numbers with up to three digits and ones.
		Add and subtract a two-digit number and tens.	Add and subtract numbers with up to three-digits and tens.	Add and subtract numbers with up to three digits and tens.	Add and subtract numbers with up to three digits and tens.	Add and subtract numbers with up to three digits and tens.
		Add and subtract two two-digit numbers (no crossing of tens boundary).	Add and subtract numbers with up to three digits and hundreds.	Add and subtract numbers with up to three digits and hundreds.	Add and subtract numbers with up to three digits and hundreds.	Add and subtract numbers with up to three digits and hundreds.
		Add three one-digit numbers.	Add and subtract two two-digit numbers (no crossing of tens boundary).	Add and subtract two two-digit numbers (crossing of tens boundary).	Add and subtract two two-digit numbers (crossing of tens boundary).	Add and subtract two two-digit numbers (crossing of tens boundary).
			Add three one-digit numbers.	Add three one-digit numbers.	Add three one-digit numbers.	Add three one-digit numbers.
					Add and subtract multiples of 10 and 100 mentally.	Add and subtract multiples of 10 and 100 mentally.
					Add and subtract near multiples of 10, 100 and 1,000 mentally.	Add and subtract near multiples of 10, 100 and 1,000 mentally.
					Add and subtract numbers which include tenths mentally.	Add and subtract decimal numbers with up to three places mentally.
					Solve mental calculations which involve multiple operations.	

C2 Written addition and subtraction.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	Add and subtract numbers using concrete objects and pictorial representations, including: • a two-digit number and ones • a two-digit number and tens • two two-digit numbers • adding three one-digit numbers	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers with up to four digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers with more than 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	Add and subtract numbers with more than 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$					Add and subtract decimal numbers using the formal written methods of columnar addition and subtraction where appropriate.
MULTIPLICATION and DIVISION						
C3 Known multiplication and division facts.		Recall and use multiplication and division facts for the 2 times multiplication table, including recognising odd and even numbers.	Recall and use multiplication and division facts for the 4 times table.	Recall and use multiplication and division facts for the 7 times multiplication table.	Recall and use multiplication and division facts for all times tables up to 12×12 .	Recall and use multiplication and division facts for all times tables up to 12×12 .
		Recall and use multiplication and division facts for the 5 times multiplication table.	Recall and use multiplication and division facts for the 8 times table.	Recall and use multiplication and division facts for the 9 times multiplication table.		
		Recall and use multiplication and division facts for 10 times multiplication table.	Recall and use multiplication and division facts for the 3 times table.	Recall and use multiplication and division facts for all times tables up to 12×12 .		
			Recall and use multiplication and division facts for the 2, 5 and 10 times table.	Recall and use multiplication and division facts for the 2, 3, 4, 5, 8 and 10 times table.		
C4 Multiplication using known facts and place value.			Use place value, known and derived facts to multiply by 0.	Use place value, known and derived facts to multiply by 0.	Use place value, known and derived facts to multiply by 0.	Use place value, known and derived facts to multiply by 0.
			Use place value, known and derived facts to multiply and divide by 1.	Use place value, known and derived facts to multiply and divide by 1.	Use place value, known and derived facts to multiply and divide by 1.	Use place value, known and derived facts to multiply and divide by 1.
				Use place value, known and derived facts to multiply 3 single-digit numbers.	Use place value, known and derived facts to multiply 3 single digit numbers.	Use place value, known and derived facts to multiply 3 single digit numbers.
				Use place value, known and derived facts to multiply multiples of 10 by a single-digit number.	Use place value, known and derived facts to multiply multiples of 10 by a single digit number.	Use place value, known and derived facts to multiply multiples of 10 by a single digit number.
				Find the effect of dividing a one or two-digit number by 10 and 100.	Multiply and divide whole numbers, including those involving decimals, by 10, 100 and 1,000.	Multiply and divide whole numbers, including those involving decimals, by 10, 100 and 1,000.
					Use place value, known and derived facts to multiply and divide multiples of 10 and 100 by single digit numbers.	Use place value, known and derived facts to multiply and divide multiples of 10 and 100 by single digit numbers, and to multiply by 25.
					Use place value, known and derived facts to multiply and divide multiples of 10 and 100 together.	Use place value, known and derived facts to multiply and divide multiples of 10 and 100 together.
					Use place value, known and derived facts to multiply and divide by 25.	Multiply decimals with up to 2 decimal places by a single digit number. (NB: some children may find using an informal written method helps with this type of calculation).
C8 Known multiplication and division facts.	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.	Calculate mathematical statements for multiplication within the known the multiplication tables and write them using the multiplication (\times), and equals (=) signs.	Calculate mathematical statements for multiplication within the known the multiplication tables and write them using the multiplication (\times), and equals (=) signs.	Write and calculate mathematical statements for multiplication using the multiplication tables that pupils know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
		Calculate mathematical statements division within the known the	Calculate mathematical statements division within the known the	Write and calculate mathematical statements for division using	Multiply numbers up to 4 digits by a two-digit number,	Multiply numbers up to 4 digits by a two-digit number,

		multiplication tables and write them using the division (\div) and equals ($=$) signs.	multiplication tables and write them using the division (\div) and equals ($=$) signs.	the multiplication tables that pupils know, including for two-digit numbers divided by one-digit numbers, using mental and progressing to formal written methods.	including long multiplication for two digit numbers.	including long multiplication for two digit numbers.
				Solve problems, including missing number problems, involving multiplication and division.	Divide numbers with up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context [NB: In calculation paper, remainders as either a remainder (e.g. 5 r 3), fraction (e.g. 5r 3/5) or decimal (e.g. 5.6) will always be acceptable]	Divide numbers with up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. [NB: In calculation paper, remainders as either a remainder (e.g 5 r 3), fraction (e.g. 5 r) or decimal (e.g. 5.6) will always be acceptable]
					Solve problems, including missing number problems, involving multiplication and division.	Solve problems, including missing number problems, involving multiplication and division.
C9 Square and Cubes.					Solve problems involving square numbers.	Solve problems involving square numbers.
					Solve problems involving cubed numbers.	Solve problems involving cubed numbers.
C10 Order of Operations.						Use their knowledge of the order of operations to carry out calculations involving the four operations.
FRACTIONS						
F1 Fractions of numbers.	Recognise, find and name a half and one quarter as one of two equal parts of an object, shape or quantity.	Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators (minimum denominators of 2, 3, 4, 5, 8, 10).	Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators (minimum denominators of 2, 3, 4, 5, 6, 7, 8, 9, 10).	Recognise, find and write fractions of a discrete set of objects and numbers: unit fractions and non-unit fractions (any denominators - linked to times tables facts).	Recognise, find and write fractions of a discrete set of objects and numbers: unit fractions and non-unit fractions (any denominators - linked to times tables facts).
F2 Decimals				Count up and down in tenths; recognize that tenths arise from dividing an object into 10 equal parts and in dividing one digit numbers or quantities by 10.	Count up and down in tenths and hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.	Count up and down in tenths and hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.
F3 Types of fractions.		Write simple fractions [e.g. 12 of 6 = 3]	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with any denominators.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with any denominators.
F4 Equivalent fractions.		Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	Recognise & show, using diagrams, equivalent fractions with small denominators.	Recognise and show, using diagrams, families of common equivalent fractions.		
F5 Calculations with fractions.			Add and subtract fractions with the same denominator within one whole [e.g. $\frac{1}{7} + \frac{5}{7} = \frac{6}{7}$].	Add and subtract fractions with the same denominator within one whole (including improper fractions).	Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	Add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions.
					Multiply proper fractions and mixed numbers by whole numbers.	Multiply proper fractions and mixed numbers by whole numbers.
						Multiply simple pairs of proper fractions, writing the answer in its simplest form.
						Divide proper fractions by whole numbers.
PERCENTAGES						
P1 Percentages of numbers.						Solve problems involving the calculation of percentages [e.g. of measures such as 15% of 360].