



Mathematics Key Learning – Number & Place Value

'Working together to achieve success'

Statements taken from the National Curriculum

Additional statements to support progression in learning.



EYFS – COUNTING

ROTE COUNTING

Rote count from 1	Rote count on from a given number between 1 and 20	Rote count back from 20 to 0	Rote count back from a given number between 0 and 20	Know what number comes before or after a given number	Say a number between two given numbers	Rote count beyond 20
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COUNTING OBJECTS

Understand that counting is to find out how many	Use one to one correspondence when counting	Understand the last number said is the number in the set	Count up to 20 objects, pictures, sounds and actions	Understand and use conservation of number
Use the word 'zero' to represent 'none'	Compare two sets of different objects saying which set is more, greater, fewer, less, same, equal	Order three or more sets of objects	State without counting (subitise) quantities within 5	Make a sensible guess of quantities within 10

NUMBER SENSE

Partition a set of objects in different ways using the terminology part - part - whole	Explore and represent the patterns in odd and even numbers	Understand that 'teen' numbers are a group of 10 plus another number	Understand 20 is the same as two groups of 10	Recognise repeating patterns in the counting sequence i.e. 6, 7, 8, 9 and 16, 17, 18, 19 and 26, 27, 28, 29 etc.
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NUMBER RECOGNITION

Recognise and identify numerals 0 to 20	Select the numeral that represents a set of objects	Order numerals 0 to 20
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GRAPHICS

Represent amounts in their own ways, explaining what they mean	Represent and explain their thinking in their own ways	Write numerals 0 to 20
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Year 1

Year 2

Year 3

Year 4

Year 5

Year 6

COUNTING

count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	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 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
count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	Find 1 or 10 more or less than a given number.	find 10 or 100 more or less than a given number	count in multiples of 6, 7, 9, 25 and 1000	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Count forwards and backwards in steps of integers, decimals and powers of 10.
given a number, identify one more and one less	Describe and extend simple sequences involving counting on or back in different steps.	Count up and down in tenths.	Find 0.1, 1, 10, 100 or 1 000 more or less than a given number	Find, 0.01, 0.1, 1, 10, 100 and 1000 and other powers of 10 more or less than a given number.	Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number.
Identify odd and even numbers linked to counting in twos from zero and one.		Describe and extend number sequences involving counting on or back in different steps.	Count up and down in hundredths.	Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal.	Describe and extend number sequences including those with multiplication/division steps, inconsistent steps, alternating steps and those where the step size is a decimal.
			Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps.		

COMPARING NUMBERS

use the language of: equal to, more than, less than (fewer), most, least	compare and order numbers from 0 up to 100; use <, > and = signs	compare and order numbers up to 1000	order and compare numbers beyond 1000	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
		Compare and order numbers with 1 decimal place	Order and compare numbers with the same number of decimal places up to two decimal places (copied from Fractions)		

IDENTIFYING, REPRESENTING AND ESTIMATING NUMBERS

identify and represent numbers using objects and pictorial representations including the number line	identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations	identify, represent and estimate numbers using different representations	Identify, represent and estimate numbers using the number line.	Identify, represent and estimate numbers using the number line.
Recognise and create repeating patterns with numbers, objects and shapes.	Partition numbers in different ways (eg $23 = 20 + 3$ and 23 equals $10 + 13$)	Partition numbers in different ways (eg $146 = 100 + 40 + 6$ and $146 = 130 + 16$)	Partition numbers in different ways (eg $2.3 = 2 + 0.3$ and $1 + 1.3$)		

READING AND WRITING NUMBERS (including Roman Numerals)

read and write numbers from 1 to 20 in numerals and words.	read and write numbers to at least 100 in numerals and in words	read and write numbers up to 1000 in numerals and in words	read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit with up to 3 decimal places (appears also in Comparing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Understanding Place Value)
		<i>Read and write numbers with 1 decimal place.</i>		read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	
		<i>Read Roman numerals from I to XII.</i>	<i>Read and write numbers to at least 10,000.</i> <i>Read and write numbers with up to two decimal places.</i>		

UNDERSTANDING PLACE VALUE

	recognise the place value of each digit in a two-digit number (tens, ones)	recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)	read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)
<i>Understand the connection between the 10 multiplication table and place value.</i>		<i>Identify the value of each digit to one decimal place</i>	find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths (copied from Fractions)	<i>Identify the value of each digit to three decimal places.</i>	identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places (copied from Fractions)
		<i>Find the effect of multiplying a 1 or 2 digit number by 10 or 100, identify the value of the digits in the answer.</i>	<i>Identify the value of each digit to two decimal places.</i>	<i>Multiply/divide whole numbers and decimals by 10, 100 and 1000.</i>	<i>Multiply/divide whole numbers and decimals by 10, 100 and 1000 giving answers up to 3 decimal places.</i>

ROUNDING

	<i>Round numbers to at least 100 to the nearest 10.</i>	<i>Round numbers to at least 1000 to the nearest 10 or 100.</i>	round any number to the nearest 10, 100 or 1 000	round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000	round any whole number to a required degree of accuracy
			round decimals with one decimal place to the nearest whole number (copied from Fractions)	round decimals with two decimal places to the nearest whole number and to one decimal place (copied from Fractions)	<i>solve problems which require answers to be rounded to specified degrees of accuracy (copied from Fractions)</i>
					<i>Round decimals with three decimal places to the nearest whole number or one or two decimal places.</i>

PROBLEM SOLVING

<i>Solve problems and practical problems involving all of the above.</i>	use place value and number facts to solve problems	solve number problems and practical problems involving these ideas.	solve number and practical problems that involve all of the above and with increasingly large positive numbers	solve number problems and practical problems that involve all of the above	solve number and practical problems that involve all of the above
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VOCABULARY

number, count (on, back, to, from), more (than), less (than), fewer, greater, most, least, units, ones, tens, hundreds, exchange, digit, equal to, estimate, guess, roughly, about the same as, multiple, odd, even	number, count (on, back, to, from), more (than), less (than), fewer, greater, most, least, units, ones, tens, hundreds, exchange, digit, place, partition, equal to, estimate, guess, roughly, about the same as, round, exact(ly), multiple of, sequence, continue, predict, rule	number, base 10, grouping, more (than), less (than), fewer, greater, most, least, compare, order, units, ones, tens, hundreds, thousands, exchange, digit, place, partition, equal to, estimate, guess, roughly, about the same as, round, exact(ly), multiple of, sequence, continue, predict, rule, add, plus, sum, total, altogether, subtract, take (away), minus, how many more/fewer, difference between, count (on, up, back, down), sequence, step, continue, predict, multiple, multiplication,	units, ones, tens, hundreds, thousands, ten thousand, one-, two-, three- or four-digit number, numeral, place value, represents, exchange, greater than, greatest, more than, most, larger than, largest, least, fewest, smallest, one...ten...one hundred...one thousand more/less, compare, order, estimate, exact, exactly, approximate, approximately, round to the nearest ten, hundred, thousand, integer, most/least significant, roman numerals, place, place value, zero, units, ones, tens, hundreds,	units, ones, tens, hundreds, thousands, ten thousands, hundred thousands, millions, power of 10, tenths, hundredths, decimal, round, exchange, digit, equal to, estimate, guess, roughly, about the same as, ascending, descending, ≈ (is approximately equal to), consecutive, predict, formula, positive, negative, above/below zero, minus, difference, Roman numeral, every other, how many times?, multiple of, digit, next, consecutive, sequence, continue, predict, decimal, pattern, pair, rule,	million, decimal, digit, significant digit, tenth, hundredth, thousandth, positive, negative, integer, decimal, ascending, descending, sequence, step size, integer, decimal, power of 10, generate, describe, extend, linear, non-linear, constant, inconsistent, alternating, formula, formulae, coordinate, x-axis, y-axis, quadrant, term, algebra, million, decimal, digit, significant digit, tenth, hundredth, thousandth, power, positive, negative, integer, fraction, proper fraction, improper fraction, mixed number, numerator,
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		<p>multiply, lots of, groups of, product, repeated addition, array, ... times as ... (e.g. 3 times as long)</p>	<p>thousands, stands for, represents, integer, positive, negative, above/below zero, minus, next, consecutive, sequence, continue, predict, pattern, rule, relationship, increase, decrease, inverse, multiples, multiplied by, divided by, pattern, justify</p>	<p>relationship, divisible (by), divisibility, factor, square number, one squared, two squared... (1^2, 2^2...), scaling up, scaling down</p>	<p>denominator, equivalent, reduced to, cancel, one whole, half, quarter, eighth, hundredth, thousandth, proportion, ratio, vulgar fraction, decimal fraction, decimal point, percentage, percent, %, factor, multiple, prime number</p>
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