

Key Maths Objectives



Year 1

1. Count to and across 100 from any number
2. Count, read and write numbers to 100
3. Read and write mathematical symbols: +, - and =
4. Identify "one more" and "one less"
5. Use number bonds and subtraction facts within 20
6. Add and subtract 1-digit and 2-digit numbers to 20, including zero
7. Recognise, find and name a half
8. Recognise, find and name a quarter
9. Measure and begin to record length, mass, volume and time
10. Recognise and name different coins and notes
11. Use language to sequence events in chronological (*time*) order
12. Recognise and use language relating to dates
13. Tell the time to the half-hour, including drawing clocks
14. Recognise and name common 2-D shapes
15. Recognise and name common 3-D shapes

Key Maths Objectives



Year 2

1. Count in steps of 2s, 3s, 5s and 10s
2. Recognise place value (*the value of each digit*) in two-digit numbers
3. Compare and order numbers up to 100 using $<$, $>$ and $=$ (*less than, greater than and equal to/same as*)
4. Recall and use addition/subtraction facts to 20, and derive related facts (*e.g. $15 + 5 = 20$ so $20 - 5 = 15$*)
5. Add and subtract, mentally and with objects, one and two-digit numbers
6. Understand and use the inverse (*reverse*) relationship between addition and subtraction
7. Know $2\times$, $3\times$, $5\times$ and $10\times$ tables, including recognising odd & even numbers
8. Calculate mathematical statements using \times and \div symbols
9. Recognise, find, name and write $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of a shape or quantity
10. Write simple fraction facts (*e.g. $\frac{1}{2}$ of $6 = 3$*)
11. Combine amounts of money to make an amount, including using \pounds and p symbols
12. Tell the time to the nearest 5 minutes, including drawing clocks
13. Describe properties of 2-D shapes (*e.g. number of sides and lines of symmetry*)
14. Describe properties of 3-D shapes (*e.g. number of edges, vertices and faces*)
15. Interpret and construct simple tables, tally charts and pictograms

Key Maths Objectives



Year 3

1. Count in multiples of 4, 8, 50 and 100
2. Compare and order numbers up to 1000
3. Mentally add and subtract 3 digit numbers where there is no value in either the 10s or 1s or both (e.g. $457 + 300$ or $765 + 60$)
4. Add and subtract using a standard column method (as set out in the calculation policy)
5. Estimate answers to calculations and use the inverse (opposite) to check answers
6. Know $1\times$, $2\times$, $3\times$, $4\times$, $5\times$, $8\times$ and $10\times$ tables
7. Understand that tenths are a whole divided into ten equal parts
8. Count up and down in tenths (e.g. 3.2, 3.3, 3.4, 3.5)
9. Compare and order simple fractions
10. Recognise and show equivalent (the same as) fractions
11. Find and write fractions of a set of objects
12. Add and subtract fractions with common denominators (the number at the bottom of a fraction)
13. Compare and calculate measures using standard units
14. Measure the perimeter (around the sides) of simple 2-D shapes
15. Add and subtract money, including giving change
16. Tell and write the time from an analogue clock, including using Roman numerals
17. Estimate and read time to the nearest minute on both a 12 and 24 hour clock
18. Identify horizontal, vertical, parallel and perpendicular lines
19. Identify whether angles are obtuse (greater than 90°) or acute (less than a 90°) or a right angle (90°)
20. Interpret and present data using bar charts, pictograms and tables

Key Maths Objectives



Year 4

1. Count backwards through zero, including negative numbers
2. Recognise place value (*the value of each digit*) in four-digit numbers
3. Round any number to the nearest 10, 100 or 1000
4. Know tables up to 12×12
5. Use place value and number facts to carry out mental calculations, including multiplying by 0 and 1
6. Use factor pairs (*e.g. 3 and 4 is a factor pair of 12*) and commutativity (*e.g. $5 \times 3 = 15$ and $3 \times 5 = 15$*) in mental calculations
7. Use formal multiplication method (*as set out in the calculation policy*)
8. Understand that hundredths are a whole divided into one hundred equal parts
9. Recognise and write the decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$
10. Divide one or two-digit numbers by 10 and 100, using tenths and hundredths
11. Round decimals with one decimal place to the nearest whole number
12. Compare numbers with up to two decimal places
13. Convert between different units of metric measurement, including money (*e.g. from kg to grams or pounds to pence*)
14. Find the area of rectilinear shapes (*shapes with straight edges and right angles*) by counting squares
15. Solve problems converting units of time
16. Compare and classify shapes, including quadrilaterals and triangles
17. Complete a simple symmetric figure with respect to a specific line of symmetry.
18. Describe positions on a 2-D grid using co-ordinates
19. Describe translations (*movements*) using a given unit to the left/right and up/down
20. Interpret and present discrete (*a fixed number of outcomes, e.g. possible outcomes of rolling a dice*) and continuous (*an infinite number of outcomes, e.g. possible finishing times in a race*) data on an appropriate graph

Key Maths Objectives



Year 5

1. Count negative numbers forwards and backwards in context (e.g. temperature)
2. Read Roman numerals to 1000, including reading years
3. Recognise and use square (a number multiplied by itself) and cube (multiplied by itself 3 times) numbers, and know the notation of 2 and 3
4. Use rounding and estimating to check accuracy of answers
5. Identify multiples (e.g. 6, 9 and 12 are all multiples of 3) and factors (e.g. 3 is a factor of 9), including finding factor pairs (e.g. 3 and 4 is a factor pair of 12) and common factors of 2 numbers (e.g. 3 is a common factor of 12 and 24)
6. Use vocabulary: prime numbers (a number that can only be divided by 2 numbers: itself and 1), prime factors (a factor that is also a prime number, e.g. 3 is a prime factor of 15) and composite numbers (any number that is not a prime number)
7. Know prime numbers up to 19
8. Multiply and divide numbers by 10, 100 or 1000, including decimals
9. Use formal multiplication methods for multiplying numbers with up to 4 digits by one or two digits (as set out in the calculation policy)
10. Divide numbers with up to 4 digits using formal division methods by a single digit number (as set out in the calculation policy)
11. Convert between mixed numbers and improper fractions (e.g. $3\frac{1}{2} = \frac{7}{2}$)
12. Compare and order fractions whose denominators (number at the bottom of a fraction) are multiples of the same number
13. Identify, name and write equivalent fractions including tenths and hundredths
14. Add and subtract fractions with denominators that are multiples of the same number
15. Multiply proper fractions and mixed numbers by whole numbers

16. Read and write decimal numbers as fractions
17. Round decimals with 2 decimal places to a whole number or to one decimal place
18. Read, write, order and compare numbers with up to 3 decimal places
19. Recognise the % symbol and explain as a fraction with the denominator 100 (parts out of 100)
20. Understand and use common approximate conversions between metric and imperial
21. Measure and calculate the perimeter (*around the sides*) of composite rectilinear shapes (*shapes made up of 2 rectangles put together*)
22. Calculate the area (*length \times width*) of rectangles, and estimate the area of irregular shapes (*shapes with different size sides and angles*)
23. Use the properties of rectangles to find missing lengths and angles
24. Distinguish between regular and irregular polygons
25. Identify 3-d shapes from 2-d drawings
26. Know angles are measured in degrees and compare acute (*less than 90°*), obtuse (*greater than 90°*) and reflex (*greater than 180°*) angles
27. Draw and measure angles to the nearest degree
28. Identify angles at a point, in a turn and on a straight line
29. Describe and represent the result of a reflection or translation (*movement*) of a shape
30. Complete, read and interpret information in tables, including timetables

Key Maths Objectives



Year 6

1. Calculate intervals across zero, including negative numbers (*e.g. what's the difference between -3 and 8?*)
2. Divide numbers using formal division methods (*as set out in the calculation policy*)
3. Use order of operations to carry out calculations (*BODMAS - Brackets, Order, Division, Multiplication, Addition and Subtraction*)
4. Use common factors to simplify fractions (*e.g. 3 is a common factor of $\frac{9}{12} = \frac{3}{4}$*)
5. Compare and order fractions of any size
6. Add and subtract fractions with different denominators (*the number at the bottom of a fraction*) and mixed numbers (*e.g. $2\frac{3}{4}$*)
7. Multiply simple pairs of proper fractions (*a fraction less than 1*)
8. Divide proper fractions by whole numbers
9. Calculate decimal fraction (*this is just the same as a decimal*) equivalents for simple fractions
10. Multiply a number with up to two decimal places by whole numbers
11. Solve problems involving the calculation of percentages
12. Recall and use equivalences between fractions, decimals and percentages
13. Solve problems using ratio (*e.g. 3:2*) using multiplication and division facts

14. Solve problems involving similar shapes where the scale factor is known (*how many times bigger one shape is than another*)
15. Solve problems involving proportion, using knowledge of fractions and multiples
16. Use simple formulae (*e.g. $a = l \times w$*)
17. Generate and describe linear number sequences
18. Express missing number problems algebraically (*a number pattern that increases/decreases by the same amount each time*)
19. Convert units of measure between smaller and larger units (*e.g. $g = kg$*)
20. Convert between miles and kilometres
21. Calculate the area of parallelograms (*any 4 sided shape with 2 pairs of parallel lines*) and triangles
22. Calculate and compare volume of cubes and cuboids
23. Illustrate and name parts of a circle
24. Finding missing angles in triangles, quadrilaterals and regular polygons
25. Recognise vertically opposite angles and find missing angles
26. Describe positions on the full co-ordinate grid
27. Translate (*move*) shapes on a co-ordinate grid and reflect in the axes
28. Construct and interpret pie charts
29. Calculate the mean (*add up all the numbers and then divide by the number of numbers*) as an average

Key Maths Objectives



Reception

1. Recognise numbers up to 20.
2. Count reliably up to 20.
3. Count up to 20 objects.
4. Count actions (*like hand claps*) or objects which cannot be moved (*like trees in a garden*).
5. Estimate how many objects they can see and check by counting them.
6. Use the vocabulary; more, fewer, add, plus, together, equals, leaves.
7. Record their maths using marks and symbols that they can interpret and explain (*including numbers*).
8. Place numbers in order.
9. Say the number 'one more than' and 'one less than' a given number up to 20.
10. Add and subtract two single digit numbers and count on and back to check the answer.
11. Using objects they solve everyday problems, including doubling, having and sharing.