Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 427–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Number and place value

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
read and write numbers from 1 to 20 in numerals and words count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens identify and represent numbers using objects and pictorial representations, including the number line, and use the language of: equal to, more than, less than (fewer), most, least	read and write numbers to at least 100 in numerals and in words compare and order numbers from 0 up to 100; use <, > and = signs recognise the place value of each digit in a two-digit number (tens, ones)	read and write numbers up to 1000 in numerals and in words compare and order numbers up to 1000 recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	order and compare numbers beyond 1000 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	read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
			round any number to the nearest 10, 100 or 1000	round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	round any whole number to a required degree of accuracy
			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
	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

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on page 426 and pages 428–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Addition, subtraction, multiplication and division

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs [Domain: Number – Multiplication and division]	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 [Domain: Number – Multiplication and division]	multiply two-digit and three-digit numbers by a one-digit number using formal written layout [Domain: Number – Multiplication and division]	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 [Domain: Number – Multiplication and division]	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
				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 [Domain: Number – Multiplication and division]	divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–427 and pages 429–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Addition, subtraction, multiplication and division (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
represent and use number bonds and related subtraction facts within 20 [Domain: Number – Addition and subtraction] add and subtract one-digit and two-digit numbers to 20, including zero [Domain: Number – Addition and subtraction] count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens [Domain: Number – Number and place value]	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 [Domain: Number – Addition and subtraction] add and subtract numbers using concrete objects, pictorial representations, and mentally, including: – a two-digit number and ones – a two-digit number and tens – two two-digit numbers – adding three one-digit numbers [Domain: Number – Addition and subtraction] recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers [Domain: Number – Multiplication and division]	add and subtract numbers mentally, including: – a three-digit number and ones – a three-digit number and tens – a three-digit number and hundreds [Domain: Number – Addition and subtraction] recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables [Domain: Number – Multiplication and division] 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 [Domain: Number – Multiplication and division]	recall multiplication and division facts for multiplication tables up to 12 × 12 [Domain: Number – Multiplication and division] 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 [Domain: Number – Multiplication and division]	add and subtract numbers mentally with increasingly large numbers [Domain: Number – Addition and subtraction] multiply and divide numbers mentally drawing upon known facts [Domain: Number – Multiplication and division]	perform mental calculations, including with mixed operations and large numbers

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–428 and pages 430–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Addition, subtraction, multiplication and division (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot [Domain: Number – Multiplication and division]		recognise and use factor pairs and commutativity in mental calculations [Domain: Number – Multiplication and division]	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers [Domain: Number – Multiplication and division] know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers [Domain: Number – Multiplication and division] establish whether a number up to 100 is prime and recall prime numbers up to 19 [Domain: Number – Multiplication and division]	identify common factors, common multiples and prime numbers
	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot [Domain: Number – Addition and subtraction] show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot [Domain: Number – Multiplication and division]				use their knowledge of the order of operations to carry out calculations involving the four operations

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–429 and pages 431–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Addition, subtraction, multiplication and division (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 [Domain: Number – Addition and subtraction] 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 [Domain: Number – Multiplication and division]	solve problems with addition and subtraction: – using concrete objects and pictorial representations, including those involving numbers, quantities and measures – applying their increasing knowledge of mental and written methods [Domain: Number – Addition and subtraction] solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts [Domain: Number – Multiplication and division]	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction [Domain: Number – Addition and subtraction] 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 [Domain: Number – Multiplication and division]	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why [Domain: Number – Addition and subtraction] 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 [Domain: Number – Multiplication and division]	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why [Domain: Number – Addition and subtraction] solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes [Domain: Number – Multiplication and division] solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign [Domain: Number – Multiplication and division] solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates [Domain: Number – Multiplication and division]	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–430 and pages 432–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Addition, subtraction, multiplication and division (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

Number – Fractions (including decimals and percentages)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	write simple fractions, for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	recognise and show, using diagrams, equivalent fractions with small denominators	recognise and show, using diagrams, families of common equivalent fractions	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	use common factors to simplify fractions; use common multiples to express fractions in the same denomination
		compare and order unit fractions, and fractions with the same denominators		compare and order fractions whose denominators are all multiples of the same number	compare and order fractions, including fractions > 1
		add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and denominators that are multiples of the same number recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–431 and pages 433–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Fractions (including decimals and percentages) (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]
					divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]
			recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents read and write decimal numbers as fractions [for example, 0·71 = $\frac{71}{100}$]	associate a fraction with division and calculate decimal fraction equivalents [for example, 0·375] for a simple fraction [for example, $\frac{3}{8}$]
			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 ones, tenths and hundredths	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 [Domain: Number – Multiplication and division]	identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
			multiply two-digit and three-digit numbers by a one-digit number using formal written layout [Domain: Number – Multiplication and division)]	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 [Domain: Number – Multiplication and division)]	multiply one-digit numbers with up to two decimal places by whole numbers

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–432 and pages 434–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Number – Fractions (including decimals and percentages) (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				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 [Domain: Number – Multiplication and division]	use written division methods in cases where the answer has up to two decimal places
		solve problems that involve all of the above	round decimals with one decimal place to the nearest whole number solve simple measure and money problems involving fractions and decimals to two decimal places	round decimals with two decimal places to the nearest whole number and to one decimal place solve problems involving number up to three decimal places	solve problems which require answers to be rounded to specified degrees of accuracy
				recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–433 and pages 435–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Ratio and proportion

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
				recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal [Domain: Number – Fractions (including decimals and percentages)] solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 [Domain: Number – Fractions (including decimals and percentages)]	solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
					solve problems involving similar shapes where the scale factor is known or can be found
					solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–434 and pages 436–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Algebra

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres [Domain: Measurement]	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres [Domain: Measurement] calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes [Domain: Measurement]	use simple formulae
count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens [Domain: Number – Number and place value]	count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward [Domain: Number – Number and place value] order and arrange combinations of mathematical objects in patterns and sequences [Domain: Geometry – Position and direction]	count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number [Domain: Number – Number and place value]	count in multiples of 6, 7, 9, 25 and 1000 [Domain: Number – Number and place value]	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 [Domain: Number – Number and place value]	generate and describe linear number sequences

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–435 and pages 437–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Algebra (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 [Domain: Number – Addition and subtraction]	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems [Domain: Number – Addition and subtraction]	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction [Domain: Number – Addition and subtraction] 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 [Domain: Number – Multiplication and division]			express missing number problems algebraically find pairs of numbers that satisfy an equation with two unknowns enumerate possibilities of combinations of two variables

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–436 and pages 438–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Measurement

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
compare, describe and solve practical problems for: – lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] – mass/weight [for example, heavy/light, heavier than, lighter than] – capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] – time [for example, quicker, slower, earlier, later] measure and begin to record the following: – lengths and heights – mass/weight – capacity and volume – time (hours, minutes, seconds) recognise and use language relating to dates, including days of the week, weeks, months and years	compare and order lengths, mass, volume/capacity and record the results using >, < and = choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels know the number of minutes in an hour and the number of hours in a day	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) know the number of seconds in a minute and the number of days in each month, year and leap year estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight	estimate, compare and calculate different measures, including money in pounds and pence convert between different units of measure [for example, kilometre to metre; hour to minute] solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling solve problems involving converting between units of time convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–437 and pages 439–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Measurement (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	convert between miles and kilometres
		measure the perimeter of simple 2-D shapes	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	recognise that shapes with the same areas can have different perimeters and vice versa
				calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	recognise when it is possible to use formulae for area and volume of shapes

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–438 and pages 440–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Measurement (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			find the area of rectilinear shapes by counting squares	calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes	calculate the area of parallelograms and triangles
				estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]

Geometry – Properties of shapes

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them			draw 2-D shapes using given dimensions and angles

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–439 and pages 441–442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Geometry – Properties of shapes (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
recognise and name common 2-D and 3-D shapes, including: – 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	compare and sort common 2-D and 3-D shapes and everyday objects identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them		identify 3-D shapes, including cubes and other cuboids, from 2-D representations	recognise, describe and build simple 3-D shapes, including making nets
recognise and name common 2-D and 3-D shapes, including: – 2-D shapes [for example, rectangles (including squares), circles and triangles]	compare and sort common 2-D and 3-D shapes and everyday objects identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line		compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify lines of symmetry in 2-D shapes presented in different orientations	use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons
					illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–440 and page 442 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Geometry – Properties of shapes (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle	identify acute and obtuse angles and compare and order angles up to two right angles by size	know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees (°) identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) – other multiples of 90°	recognise angles where they meet at a point, are on a straight line, or are vertically opposite and find missing angles

Geometry – Position and direction

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			describe positions on a 2-D grid as coordinates in the first quadrant plot specified points and draw sides to complete a given polygon		describe positions on the full coordinate grid (all four quadrants)

Tracking back and forward through the Mathematics National Curriculum attainment targets – Year 6

If a pupil has Not Yet Achieved (NYA) mastery or has Achieved and Exceeded (A&E) mastery, refer to the 'Tracking back and forward through the Mathematics National Curriculum attainment targets' charts below and on pages 426–441 to determine at what year group they are currently working. Related Assessment Tasks and Assessment Exercises can be found in the corresponding Busy Ant Maths Assessment Guide.

Geometry – Position and direction (continued)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			describe movements between positions as translations of a given unit to the left/right and up/down complete a simple symmetric figure with respect to a specific line of symmetry [Domain: Geometry – Properties of shapes]	identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	draw and translate simple shapes on the coordinate plane, and reflect them in the axes
	interpret and construct simple pictograms, tally charts, block diagrams and simple tables ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data	interpret and present data using bar charts, pictograms and tables solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	complete, read and interpret information in tables, including timetables solve comparison, sum and difference problems using information presented in a line graph	interpret and construct pie charts and line graphs and use these to solve problems
					calculate and interpret the mean as an average