

# Heath Mount School Maths Vocabulary Progression



# **EYFS – Year 6**

		Rising 3s	Nursery	Reception	Year 1	Year 2
		Number rhymes and	Counting manipulatives	Counting manipulatives,	Number to 100 in	Multiplication squares,
	Resources	stories, snack for	e.g. pebbles, building	Items for shop role play	varying formats e.g.	numbers to 100 in
		counting objects,	bricks, number	to include: coins, till,	counting bead, lines,	varying formats, odd
		counting	rhymes, snack for counting	price labels, credit cards,	squares, tens frames,	and even number
		manipulatives,	objects, link numerals and	varying sizes and formats	Cuisenaire rods, place	charts, base ten blocks,
		numbered items to 3	amounts up to 5 e.g. 3	of number lines to 10/20,	value charts to include:	place value arrow cards
		with link from	trucks. Items for shop role	tens frames, Numicon,	H T Ones	
		numerals to amounts,	play to include: coins, till,	number beads,		
		size resources to show	price labels, credit cards		Measuring containers	Measuring containers
		large and small, clock,	varying sizes and formats	Numbered items to 10,	of different shapes e.g.	with metric and non-
			of number lines to 5/10,	number books e.g. The	cylinders, jugs,	metric scales, digital
			fives frames,	Giant Turnip, size	weighing scales , real	weighing scales, metric
Maths Area		Large number type	Numbered items to 5,	resources e.g. Russian	life measuring	weights, trundle
Iviatilis Alea		blocks, sorting bears,	maths books e.g. Bear	Dolls to show a	containers e.g. bottles,	wheels, measuring tape
		puzzles, range of	Hunt, Size resources to	progression of size, maths	tubs, of varying sizes for	exceeding 1 m
		counting toys,	show large , medium and	board games and 1-6	comparison, meter	
		Number games	small, tool box tape	dice, 2D shape outlines,	sticks	Thermometer, analogue
			measures, balance scales,	meter rules, weighing		and digital clocks, stop
			bathroom scales, clock, real	scales, balance scales,	Thermometer,	watches
			life sorting equipment e.g.	bathroom scales, tape	analogue clock, stop	
			egg boxes, jars filled with	measures, rulers, top	watches	Fraction Resources for ¼
			small amounts of objects to	trump cards (data),		and 1/3 e.g. pizza game
			5, Visual daily routine, sand	results of class	Regular 2D shapes	
			timers to 1 min	information, real life	Regular 3D shapes:	Real coins
				sorting equipment e.g.	Pyramids. Cylinder,	Play money to include
			Outdoor: larger scale of:	baking trays, paper cake	Pentagon Hexagon	coins and notes (British



		Digits, number frames,	cases, jars filled with		and other currency
		weighing scales, balance	small amounts of objects	Real coins	relevant to cohort)
		scales, counting	to 10,	Play money to include	
		manipulatives	Sand timers to 5 mins,	coins and notes (British	
			clock, calendar, visual	and other currency	Maths apps: QR codes,
			daily routine, interactive	relevant to cohort)	
		Unifix cubes, range of	timers for count downs		
		sorting toys, five square,			
		puzzles, 2D shape toys,	Maths apps: QR codes,		
		range of counting toys,		Maths apps: QR codes,	
		balance scales, numbers,	Outdoor: larger scale of:		
		measuring tapes, dice,	Digits, number frames,		
		number games	weighing scales, balance		
			scales, counting		
			manipulatives		
	<b>Number names</b> 1, 2, 3,	Number names: 1, 2, 3, 4, 5	Number	Number and Place	Number and Place
	Colours	and beyond	Count, subitise, order,	Value	Value
	Shape properties:	Quantity/Comparison:	stable order, compare,	Sort. Represent.	Count in steps. Count in
	straight, round, (some	more than, less than, the	forwards, backwards,	Multiples. Partition,	multiples. Place value.
	shape names will be	same.	numerals, digit. One more.	Ones, Tens, Addition	Estimate. Compare.
	introduced during play,	Colours	One less, equals to, more	add. Subtraction.	Addition and
	explore and learn e.g.	Shape properties:	than. Less than. Before,	Difference. Equals.	Subtraction
	circle, square and	straight, round, shape	after, number bonds	Facts. Problems. Missing	Sum, 3 digit number.
Vocabulary	triangle)	names (these will include	Addition/Subtraction	number problems. 2	Commutative.
	Positional language:	circle, triangle, square,	Add. Plus, altogether.	digit number. Inverse.	Multiplication and
	big, small,	oblong),	Total. Take away, part,	Multiplication and	Division
	Counting:	Positional Language:	whole. Double. Half. Equal	Division	Multiplication tables.
	same, different, count,	turn	unequal. Shared, group.	Multiplication. Division.	Commutative. Repeated
	more, less.	Measure/Comparisons:	Odd. Even. Count on/back	Arrays. whole. Half.	addition.
	Sequencing:	long, short ,big, small, size,	Measure	Quarter. Equal parts.	Fractions
	first, then.	heavy, light,	Scales, Measure. Wider,	Measure	Three quarters, Third.
	Pattern:		narrower. Longer, Shorter.		Equivalent fractions.



recognise in	Time: now, soon, later,	Taller, Length. Height.	Compare. Mass.	Unit fractions. Non unit
environment e.g.	morning, afternoon, night,	Weight, Container,	Volume. chronological	fractions. Numerator.
stripes, spotty	bedtime	Capacity. Heavy. heavier,	order. Days of the week.	Denominator. One
	Sequencing: What comes	light, lighter, full, half full,	Months of the year.	Whole
	next/first/then.	empty	O'clock. Half past.	
	Pattern: repeated, same,		Second. Money. Coin.	
	different	Time:	Notes. Pounds. Pence,	Measure
		quicker, Slower, earlier,	Geometry	Kilogram. Gram, Quarter
		later, before, after, first,	Sides, Corners. Faces.	full. Three quarters full.
		next, today, yesterday,	Properties. Pyramids.	Litres. Millilitres,
		tomorrow, morning,	Cylinder, Pentagon	Temperature. Celsius.
		afternoon, evening, day,	Hexagon.	Intervals of time.
		week, hour, second.	Position/Direction.	Quarter past/to,
		seasons, birthdays,	Movement. Whole turn.	Duration. Value.
		holiday	Quarter turn. Half turn.	Change.
		Geometry	Three quarter turn.	Geometry
		2D shapes. Rectangles:		Line of symmetry.
		oblong and square. Circle.		Properties. Edges.
		Triangle.		Vertices. Vertex.
		3D shapes. Cuboid. Cubes		Clockwise. anti
		Cone. Sphere,		clockwise. Straight line.
		Properties: Curved.		Rotation. Arrange.
		Straight. Flat. Over.		Sequences.
		Positional Language		Statistics
		Under. Between. Around.		Pictograms. Tally chart.
		Through. On. into. Next		Block diagram.
		to. Behind. Beneath. On		Category. Sorting.
		top of.		Totaling. Comparing.
		Patterns.		Horizontal. Vertical.
		Repeating		



# **Maths Vocabulary Definitions**

#### Number

- 1. **Count**: The process of determining the total number of items in a set by assigning one number to each item in the set, typically done sequentially starting from one.
- 2. **Subitise**: The ability to recognize the number of objects in a small group without having to count them. For example, instantly knowing that a group of three objects represents the number 3.
- 3. Order: To arrange numbers or objects in a specific sequence, often from least to greatest (ascending order) or from greatest to least (descending order).
- 4. **Stable Order**: The principle that the sequence of numbers is consistent and always follows the same order (e.g., 1, 2, 3, 4, 5...) when counting or sequencing.
- 5. Compare: To examine two or more quantities or numbers to determine if they are equal or if one is greater or smaller than the other.
- 6. Forwards: Moving in the direction from smaller to larger numbers, as in counting 1, 2, 3, etc.
- 7. Backwards: Moving in the direction from larger to smaller numbers, as in counting down from 10 to 1.
- 8. Numerals: The symbols used to represent numbers, such as 1, 2, 3, 4, etc.
- 9. **Digit**: A single symbol used to represent a number, typically between 0 and 9, that forms part of a numeral (e.g., the numeral 23 consists of the digits 2 and 3).
- 10. **One More**: The number that is one greater than a given number. For example, one more than 4 is 5.
- 11. One Less: The number that is one less than a given number. For example, one less than 4 is 3.
- 12. Equal To: A term used to show that two expressions or numbers are the same in value. For example, 4 equals to 4.
- 13. More Than: A comparison term indicating that one number is greater than another. For example, 5 is more than 3.
- 14. Less Than: A comparison term indicating that one number is smaller than another. For example, 3 is less than 5.
- 15. **Before**: Refers to a number or object that comes earlier in a sequence or set. For example, 3 comes before 4.
- 16. After: Refers to a number or object that comes later in a sequence or set. For example, 5 comes after 4.
- 17. Number Bonds: Pairs of numbers that add up to a given total. For example, number bonds for 10 include (1, 9), (2, 8), (3, 7), etc

#### Number and Place Value

- 1. **Count in Steps**: Counting by a fixed number, such as counting by 2s, 5s, or 10s.
- 2. Count in Multiples: Counting numbers in sets or groups that are the same, such as multiples of 3 (3, 6, 9, 12, etc.).
- 3. **Place Value**: The value of a digit depending on its position in a number. For example, in 456, the 4 represents 400, the 5 represents 50, and the 6 represents 6.
- 4. Estimate: To make an approximate calculation or guess based on known information.



5. **Compare**: To examine two or more quantities or numbers to determine if one is greater than, smaller than, or equal to another.

#### Addition/Subtraction

- 6. Add/Plus/ To combine two or more numbers or amounts together to find the total.
- 7. Altogether/Total: The total amount or sum after addition.
- 8. Take Away: To subtract or remove a quantity from another.
- 9. Part: A portion of a whole.
- 10. Whole: The complete or entire amount.
- 11. **Double**: To multiply a number by two or make it twice as large.
- 12. Half: To divide something into two equal parts.
- 13. Shared: To divide something into parts for each person or group.
- 14. Group: A collection of objects or numbers.
- 15. **Odd**: A number that cannot be divided exactly by 2, like 1, 3, 5, 7, etc.
- 16. Even: A number that can be divided exactly by 2, like 2, 4, 6, 8, etc.
- 17. Count On/Back: To increase (count on) or decrease (count back) in number order.
- 18. Sum: The result of adding two or more numbers together.
- 19. **3-Digit Number**: A number that has three digits, such as 100, 234, or 999.
- 20. **Commutative**: A property that means the order of numbers does not affect the result of addition or multiplication. For example, 4 + 5 = 5 + 4.

#### Multiplication and Division

- 1. **Multiplication Tables**: A chart or list showing the products of numbers, typically used to learn multiplication facts, like the table of 2s (2, 4, 6, 8, etc.).
- 2. **Commutative**: A property that means the order of numbers does not affect the result of multiplication or addition. For example,  $3 \times 4 = 4 \times 3$ .
- 3. **Repeated Addition**: A way to understand multiplication by adding the same number multiple times. For example, 3 × 4 is the same as adding 4 three times: 4 + 4 + 4.
- 4. Arrays: A way of arranging objects or numbers in rows and columns. Arrays help to visualize multiplication and division by showing repeated groups of items. For example, 3 rows of 4 objects (3 × 4) form an array.

# Measure

- 5. Scales: A system of measurement or a tool used to measure weight.
- 6. Measure: To determine the size, length, amount, or degree of something.
- 7. Length: The measurement of how long something is.



- 8. Height: The measurement of how tall something is.
- 9. Weight: The measure of how heavy an object is.
- 10. Capacity: The amount of space inside a container

#### Geometry

- 11. 2D Shapes: Flat shapes that have length and width but no depth, such as squares, rectangles, circles, and triangles.
- 12. Rectangles (Oblong and Square):
  - **Oblong**: A rectangle where the length is longer than the width.
  - Square: A rectangle with equal-length sides.
- 13. Circle: A round, 2D shape with every point on its edge equidistant from the centre.
- 14. Triangle: A shape with three straight sides and three corners/vertices
- 15. **3D Shapes**: Solid shapes that have length, width, and depth, such as cubes, cuboids, spheres, cones, etc.
- 16. Cuboid: A 3D shape with six rectangular faces, like a box.
- 17. Cube: A 3D shape where all six faces are squares.
- 18. **Cone**: A 3D shape with a circular base that tapers to a point.
- 19. Sphere: A perfectly round 3D shape where every point on the surface is equidistant from the centre.
- 20. Curved: A line or surface that bends or arches without sharp angles.
- 21. **Straight**: A line or path that has no curves or bends.
- 22. Flat: A surface that is even and level with no bumps or curves.
- 23. Line of Symmetry: A line that divides a shape into two identical parts, so that one side is a mirror image of the other.
- 24. Properties: Characteristics or features of a shape, such as the number of sides, angles, or symmetry.
- 25. Edges: The straight lines where two faces of a 3D shape meet.
- 26. Vertices: The points where two or more edges of a shape meet. (Plural of vertex)
- 27. Vertex: A point where two or more edges of a shape meet (singular form of vertices).
- 28. Clockwise: The direction of rotation that follows the movement of the hands on a clock (rightward).
- 29. Anti-Clockwise: The opposite direction to clockwise, rotating to the left (counterclockwise).
- 30. Straight Line: A line with no curves, extending infinitely in both directions.
- 31. Rotation: The action of turning a shape around a fixed point.
- 32. Arrange: To organize or position things in a particular order or pattern.
- 33. Sequences: A set of numbers or objects arranged in a particular order, following a specific rule or pattern.



#### **Positional Language**

- 34. **Under**: Beneath something, or lower than.
- 35. Between: In the middle of two things or places.
- 36. Around: Moving in a circle or surrounding something.
- 37. Through: Moving from one side to the other of something.
- 38. On: Positioned on top of something.
- 39. Into: Moving inside or toward the inside of something.
- 40. Next to: Beside something, very close to it.
- 41. Behind: Positioned at the back of something.
- 42. Beneath: Positioned directly under something.

#### Patterns

43. **Repeating**: A sequence or arrangement that recurs or is repeated in a regular pattern. For example, alternating colours or numbers

#### Fractions

- 44. Whole: The complete or entire amount of something, without any parts missing. For example, a whole apple is an entire apple, not a part of it.
- 45. Three Quarters: A fraction represented as ¾, which means three out of four equal parts.
- 46. Third: A fraction represented as <sup>1</sup>/<sub>3</sub>, which means one out of three equal parts.
- 47. **Equivalent Fractions**: Fractions that represent the same value, even though they may have different numerators and denominators. For example, 1/2 is equivalent to 2/4.
- 48. Unit Fractions: Fractions where the numerator is 1, representing one part of a whole. For example, 1/2, 1/3, 1/4.
- 49. Non-Unit Fractions: Fractions where the numerator is greater than 1. For example, 2/3, 3/4.
- 50. Numerator: The top number in a fraction that represents how many parts are being considered.
- 51. Denominator: The bottom number in a fraction that represents the total number of equal parts the whole is divided into.
- 52. **One Whole**: A complete, undivided object or number, represented as 1 or 1/1 in fractions.

#### Statistics

- 53. Pictograms: A type of graph that uses pictures or symbols to represent data, with each picture representing a specific number.
- 54. Tally Chart: A chart used to count and record data in groups of five, often used for counting.
- 55. Block Diagram: A type of chart that uses blocks or bars to represent data, with the length or height of each block showing the quantity.
- 56. Category: A group or class of items that share similar characteristics or attributes.
- 57. Sorting: The process of arranging data or objects in a specific order or grouping based on certain characteristics.



58. Totalling: The process of adding up all the amounts or values in a set to find the total sum.

- 59. Comparing: The process of looking at two or more things and determining how they are alike or different.
- 60. Horizontal: A direction or line that runs left to right, parallel to the horizon.
- 61. Vertical: A direction or line that runs up and down, perpendicular to the horizon.

# Maths Vocabulary Progression Year 3 – Year 6



		Year 3	Year 4	Year 5	Year 6	Year 7 & 8
Maths area	Resources			Protractor Compass	Calculator	

# **Maths Vocabulary Definitions**

#### Number and Place Value

- Ascending: To arrange numbers or values in increasing order, from smallest to largest (e.g., 1, 2, 3, 4, 5).
- Descending: To arrange numbers or values in decreasing order, from largest to smallest (e.g., 5, 4, 3, 2, 1).
- Roman Numerals represented by letters. I = 1, II = 2, III = 3, IV = 4, V = 5, VI = 6, VII = 7, VIII = 8, IX = 9, X = 10, XI = 11, XII = 12, XIII = 13.
- Consecutive: Numbers or objects that follow one after another in order, without interruption (e.g., 1, 2, 3, 4, 5).
- Decimal: A number that includes a decimal point, which separates the whole number part from the fractional part (e.g., 3.14).
- Decimal Places: The number of digits to the right of the decimal point. For example, in 0.456, there are three decimal places.
- Round to the Nearest: To round a number to the closest value at a given place value. For example, rounding 47 to the nearest ten gives 50.
- Integer: A whole number that can be positive, negative, or zero, without fractions or decimals (e.g., -3, 0, 7).
- Negative Integers: Whole numbers less than zero (e.g., -1, -2, -3).
- Count Through Zero: To count up or down through zero, such as counting from -3, -2, -1, 0, 1, 2, 3.
- Powers of 10: For example, 10<sup>2</sup> = 100 (10 x 10) 10<sup>3</sup> = 1000 (10 x 10 x 10)
- Negative: A number less than zero, often represented with a minus sign (e.g., -5).

#### **Number Facts**

- Factor Pairs: Two numbers that, when multiplied together, give a product. For example, the factor pairs of 12 are (1, 12), (2, 6), and (3, 4), because 1 × 12 = 12, 2 × 6 = 12, and 3 × 4 = 12.
- Composite Number: A whole number greater than 1 that has more than two factors. For example, 12 is a composite number because it has factors 1, 2, 3, 4, 6, and 12.
- Prime Number: A whole number greater than 1 that has exactly two factors: 1 and itself. For example, 5 is a prime number because it can only be divided evenly by 1 and 5.



- Prime Factors: The prime numbers that multiply together to give a product. For example, the prime factors of 12 are 2 and 3, because 2 × 2 × 3 = 12.
- Square Number: A number that is the product of an integer multiplied by itself. For example, 16 is a square number because 4 × 4 = 16.
- Cubed Number: A number that is the product of an integer multiplied by itself three times. For example, 27 is a cubed number because 3 × 3 × 3 = 27.
- Square Root: A number that, when multiplied by itself, gives the original number. For example, the square root of 16 is 4 because 4 × 4 = 16.

# Addition and Subtraction

- Column Addition: A method of adding numbers by writing them vertically in columns, aligning the digits by place value (ones, tens, hundreds, etc.). The addition is carried out column by column, starting from the rightmost column.
- Column Subtraction: A method of subtracting numbers by writing them vertically in columns, aligning the digits by place value. Subtraction is performed column by column, borrowing from the next higher place value when necessary.
- Exchanging: Exchanging refers to trading or moving amounts from one place value to another, often seen in carrying (when adding) or borrowing (when subtracting). For example, in column subtraction, you may exchange 10 from the tens column to subtract from the ones column.
- Integer Scaling Problems: These are problems that involve multiplying or dividing integers by other integers, leading to scaled versions of the original numbers. For example, scaling 5 by 3 results in 15 (5 × 3).
- Correspondence Problems: These are problems where there is a one-to-one relationship between two sets, often used in counting or matching scenarios. For example, matching objects to labels or counting the number of items in two equal groups.
- Derived Facts: These are mathematical facts or relationships that are based on previously known facts. For example, knowing that 2 × 3 = 6 helps derive that 6 ÷ 3 = 2, or knowing that 5 + 5 = 10 helps derive that 10 5 = 5.
- 4-Digit Numbers: Numbers that have four digits, ranging from 1000 to 9999. For example, 1234, 4567, and 7890 are all 4-digit numbers.
- Operations: addition, subtraction, multiplication, and division.
- Methods: The steps or processes used to solve mathematical problems. For example, long division is a method for dividing numbers, and the column addition method is used for adding large numbers.
- Formal Written Layout: A systematic and organised way of writing out calculations or solutions, often used for clarity and to ensure accuracy. This layout includes properly aligned columns for addition or subtraction, and it may involve steps being clearly shown for operations.



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• Distributive Law: multiplying a number by a group of numbers added together is the same as doing each multiplication separately.

#### Multiplication and Division

- Product: The result of multiplying two or more numbers together. For example, the product of 3 and 4 is 12 (3 × 4 = 12).
- Multiples e.g. multiples of 4: Numbers that can be divided by 4 without a remainder. They follow the pattern: 4, 8, 12, 16, 20, etc.
- Scale Up: To increase the size or amount of something by multiplying it by a certain factor. For example, if a recipe calls for 2 cups of flour, scaling up by a factor of 3 would require 6 cups of flour.
- Short Multiplication: A method for multiplying numbers, typically used when multiplying smaller numbers or numbers with fewer digits. For example, multiplying 23 × 4 using the short multiplication method involves multiplying 4 by both the tens (20) and ones (3) and then adding the results.
- Grid Method: A method of multiplication that breaks down numbers into place values, using a grid to organise the partitioned (expanded) number. For example, to multiply 23 × 15, you break it down into (20 × 10), (20 × 5), (3 × 10), and (3 × 5), and then add the results together.
- Decimal Multiplication: The process of multiplying decimal numbers. For example, multiplying 0.5 × 0.3 is done by ignoring the decimal points, multiplying as if they were whole numbers (5 × 3 = 15), and then placing the decimal in the correct position to get 0.15.
- Expanded Method: A method of multiplication or division that involves breaking down numbers into their place values and performing operations on those smaller parts. For example, for 23 × 12, you expand it as (20 × 10), (20 × 2), (3 × 10), and (3 × 2), and then combine the results.
- Divisor: A number that divides another number evenly. For example, in  $12 \div 4 = 3$ , the divisor is 4.
- Chunking: A method of division where the divisor is subtracted from the dividend in chunks or groups, and the process is repeated until no more chunks can be subtracted. This is often used in division to make it easier to calculate large numbers.
- Short Division: (bus stop method) A method of dividing numbers that does not require writing down all the steps like long division. It is often used for dividing smaller numbers. For example, 84 ÷ 4 can be calculated directly by dividing 84 by 4 in smaller steps.
- Remainders: The amount left over after division when one number doesn't divide evenly by another. For example, in 14 ÷ 3, the quotient is 4, and the remainder is 2 (since 14 ÷ 3 = 4 remainder 2).

# Fractions, decimals and percentages

- Numerator: The top number in a fraction
- Denominator: The bottom number in a fraction



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- Unit Fraction: A fraction where the numerator is 1. For example, 1/2, 1/3, and 1/4 are unit fractions.
- Non-Unit Fraction: A fraction where the numerator is greater than 1, representing more than one part of a whole. For example, 3/4
- Equivalent Decimals and Fractions: For example, 1/2 is equivalent to 0.5, and 3/4 is equivalent to 0.75.
- Proper Fractions: Fractions where the numerator is smaller than the denominator, representing a part of a whole. For example, 5/6
- Improper Fractions: Fractions where the numerator is equal to or greater than the denominator, For example, 4/4 and 7/6
- Mixed Numbers: A whole number combined with a proper fraction. For example, 2 1/2 (two and a half) is a mixed number

#### Geometry

- Orientation: The direction in which an object is positioned or facing. It describes the position of an object in relation to a reference point, such as the way a shape is rotated or flipped.
- Same Orientation: When two objects or shapes are aligned in the same direction, with no rotation or reflection between them. For example, two triangles that are facing the same way have the same orientation
- Different Orientation: When two objects or shapes are positioned differently, either rotated or reflected. For example, two triangles facing opposite directions have different orientations.
- Horizontal: A line or direction that runs left to right or side to side
- Vertical: A line or direction that runs up and down
- Perpendicular: When two lines intersect at a right angle (90 degrees).
- Parallel: Lines that are always the same distance apart and never meet

# Shapes

- Polygon: A closed, two-dimensional shape with straight sides.
- Regular Polygon: A polygon where all sides and all angles are equal. For example, an equilateral triangle or square.
- Irregular Polygon: A polygon where the side and angles are not all equal. An example would be a trapezoid with unequal sides.
- Hexagon: A polygon with six sides and six angles. The interior angles of a regular hexagon are 120 degrees.
- Pentagon: A polygon with five sides and five angles. The interior angles of a regular pentagon are 108 degrees.
- Octagon: A polygon with eight sides and eight angles. The interior angles of a regular octagon are 135 degrees.
- Parallelogram: A quadrilateral with opposite sides that are parallel and equal in length. Opposite angles in a parallelogram are equal.
- Rhombus: A parallelogram where all four sides have equal length. A rhombus has opposite equal angles, and its diagonals bisect each other at right angles.
- Dodecagon: A polygon with twelve sides and twelve angles. The interior angles of a regular dodecagon are 150 degrees.
- Kite: A quadrilateral with two pairs of adjacent sides that are equal in length.



• Quadrilateral: A polygon with four sides. Examples include squares, rectangles, parallelograms, and trapezoids.

# **Co-Ordinates**

- Coordinates: A set of numbers that specify the position of a point on a grid, typically using the x-axis (horizontal) and y-axis (vertical)
- Quadrant: One of the four sections of a coordinate grid, divided by the x-axis and y-axis.
- Translation: Where an object is moved from one position to another without changing its shape, size, or orientation. Every point of the object moves the same distance in the same direction
- Adjacent: Two sides in a shape that meet at a corner are adjacent sides.
- Reflections: A type of transformation where an object is flipped over a line (called the line of reflection), creating a mirror image.

#### Angles

- Right Angle: An angle that measures exactly 90 degrees. It is formed when two lines or segments are perpendicular to each other.
- Acute Angle: An angle that measures less than 90 degrees.
- Obtuse Angle: An angle that measures more than 90 degrees but less than 180 degrees.
- Reflex Angles: Angles that measure more than 180 degrees but less than 360 degrees.
- Vertically Opposite Angles: Angles that are opposite each other when two lines intersect. These angles are always equal in measure.
- Angles at or around a Point: The sum of all angles around a point is 360 degrees.
- Whole Turn: A rotation of 360 degrees, or a complete circle, bringing an object back to its original position.
- Straight Line: the angles on a straight line add up to 180 degrees

# Triangles/2D Shapes

- Isosceles Triangle: A triangle that has at least two sides of equal length, and the angles opposite those sides are also equal.
- Equilateral Triangle: A triangle where all three sides and all three angles are equal, with each angle measuring 60 degrees.
- Scalene Triangle: A triangle where all three sides have different lengths, and all three angles are different.
- Right-Angled Triangle: A triangle that has one angle that measures exactly 90 degrees.
- Composite Rectilinear: A shape made by putting together smaller shapes with straight sides, called rectilinear shapes.
- Compound/Composite shapes: A shape made up of various 2D shapes

# Circles

- Circumference: The distance around the edge of a circle.
- Radius: The distance from the centre of a circle to any point on its circumference. It is half the length of the diameter.
- Diameter: A straight line that goes from one side of the circle to the other, passing through the middle (the centre)

# Measures

• The **perimeter** is the distance all the way around the outside of a shape.



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- The **area** is how much space is inside a shape.
- Volume is how much space something takes up. If you have a box, the volume tells you how much stuff (like toys or books) can fit inside. For a box, you multiply the length, width (breadth), and height to find the volume.
- Imperial units are a way of measuring things, like inches, feet, and pounds.
- Metric units are another way to measure things, like meters, grams, and litres..
- **Cubic units** are used to measure the volume of 3D objects, like boxes. You might measure in cubic centimeters (cm<sup>3</sup>) or cubic meters (m<sup>3</sup>). It's like counting how many little cubes can fit inside an object.

# Statistics/Charts

- A **bar chart** is a way to show information using bars.
- A **table** is a way to organise information in rows and columns, like a chart. It helps you see things clearly and easily, like a list of scores in a game.
- A frequency table is a table that shows how often something happens.
- A **Carroll diagram** is a way to sort things into different groups. It looks like a big box with two questions.
- A Venn diagram uses circles to show how things are similar or different. If you have two circles, one might show animals that can fly, and the other circle might show animals that have fur. Where the circles overlap, you'll see animals that both fly and have fur.
- A **timetable** shows what happens at different times, like when school starts, when lunch is, and when you go home. It helps you know what to expect at different parts of the day.
- A **pie chart** is a circle that's cut into slices to show how things are divided. Each slice represents part of a whole, like showing how much of each colour people like in a survey. The bigger the slice, the more people like that colour!

#### Graphs

- A time graph shows how things change over time. It's like drawing a picture of how much you grow each year, showing what happens at different times.
- A **line graph** uses a line to show how something changes. For example, you could draw a line graph to show how tall you are every year.

# MMMR

- The **mean** is like the average. You add up all the numbers, then divide by how many numbers there are. For example, if you have 5, 7, and 9, the mean is  $(5 + 7 + 9) \div 3 = 7$ .
- The **mode** is the number that appears most often. For example, if you have the numbers 2, 3, 3, 5, the mode is 3 because it appears more than the others.



- The **median** is the middle number in a list when the numbers are in order. For example, if you have the numbers 1, 3, 5, the median is 3 because it's in the middle.
- The **range** is the difference between the highest and lowest numbers in a set. For example, if you have the numbers 2, 5, and 8, the range is 8 2 = 6.

#### Data

- Continuous data is information that can be any number, like height or temperature.
- **Discrete data** is information that can only be certain whole numbers, like counting how many apples there are. You can't have part of an apple in this case, just whole numbers like 1, 2, 3, and so on.
- **Comparison** is when you look at two or more things and see how they are the same or different. For example, you might compare the height of two plants to see which one is taller.
- **Difference** is the gap between two numbers or amounts. For example, if you have 5 apples and your friend has 3, the difference is 2 apples.
- To **interpret** something means to understand or explain what it means. For example, if you look at a chart of how much rain fell last week, you would interpret it to see which days had the most rain.

#### Algebra

- A **variable** is like a mystery box that can hold any number. We use letters, like x or y, to stand for a number we don't know yet. For example, in the equation x + 3 = 5, x is a variable because we need to figure out what number it represents.
- An **expression** is a math phrase made up of numbers, variables, and math symbols (like +, -, or =). But an expression doesn't have an answer yet. For example, 3 + x is an expression, and you have to solve it to find out what x is.
- An **equation** is like a math sentence with an equals sign (=) that says both sides are the same. For example, x + 3 = 5 is an equation because both sides (left and right) are equal. You solve it to find out what x equals.
- To **solve** an algebra problem means to find out what the variable (like x) equals. For example, in the equation x + 3 = 5, you solve it by figuring out that x = 2.
- To **simplify** means to make a math expression easier to work with by combining like terms. For example, 2x + 3x simplifies to 5x because both terms have x
- A **term** is a part of an expression or equation. It can be a number, a variable, or both. For example, in the expression 2x + 3, 2x and 3 are terms.
- Like terms are terms that have the same variable. For example, in the expression 2x + 3x, 2x and 3x are like terms because they both have x. You can add them together to make 5x.



• The **nth term** is a way to describe any term in a number pattern or sequence. It's a formula that tells you how to find any number in the sequence, no matter how far along you are.

