Knowledge Organiser for KS2 Maths

Number and Place Value	
Key Vocabulary	
Tenth, hundredth	Tenth: the value of the digit in the tenths column e.g. 3.26 has 2 tenths Hundredths: the value of the digit in the hundredths column e.g. 3.26 had 6 hundredths
Multiples	Times tables e.g. 2, 4, 6, 8, and 10 are multiples of 2. To get these numbers, you multiplied 2 by 1, 2, 3, 4, and 5 etc…
Factors	Numbers that when multiplied produces a given number e.g. 4 and 8 are factors of 32
Common multiples	A number that is a multiple of two or more numbers. The common multiples of 3 and 4 are 12, 24... The least common multiple (LCM) of two numbers is the smallest number (not zero) that is a multiple of both
Common Factors	When you find the factors of two or more numbers, and then find some factors are the same they are the "common factors" e.g. 4 is a common factor of 16 and 32
Prime number	A Prime Number can be divided evenly only by 1, or itself; it must be a whole number greater than 1. e.g. 5
Square numbers	A number which is the product of itself. E.g. 9 is a square number 3 × 3 = 9
Cubed numbers	A number multiplied by itself three times. The cube of 2 is 8 (2 x 2 x 2)
Composite numbers	A whole number that can be divided evenly by numbers other than 1 or itself. Example: 9 can be divided evenly by 3 (as well as 1 and 9), so 9 is a composite number. But 7 cannot be divided evenly (except by 1 and 7), so is NOT a composite number (it is a prime number)
Linear sequence	A number pattern which increases (or decreases) by the same amount each time. The amount it increases or decreases by is known as the common difference. E.g. 3, 6, 9, 12
Numerator/denominator	The numerator is the top number in a fraction and the denominator is the bottom number e.g. here the numerator is 4 and the denominator is 5 =4/5
Simplify fractions	...on is in simplest form when the top and bottom cannot be any smaller (while still ...whole numbers). Example: 2/4 can be simplified to ½ ...plify a fraction, divide the top and bottom by the highest number that can divide into ...umbers exactly
Equivalent	Different fractions that name the same number e.g. ½ = 2/4
Mixed numbers	A number consisting of an integer and a proper fraction e.g. 5 ½
Improper fractions	A fraction in which the numerator is greater than the denominator e.g. 5/4
Percentage	A percent is a ratio whose second term is 100. Percent means parts per hundred. In mathematics, we use the symbol % for percent
Negative integers	A number to the left of zero on the number line. It is less than zero. E.g. -5
Mean	The mean is the average of the numbers. To calculate: Just add up all the numbers, then divide by how many numbers there are
Ratio	Written with colons E.g. compare the number of girls to boys in a litter of puppies= 2:4
Proportion	Written as fractions 3/4 to say that there are three girls in every four children
Roman numerals	Any of the letters representing numbers in the Roman numerical system: I = 1, V = 5, X = 10, L = 50, C = 100, D = 500, M = 1,000
Convert	A change in the form of a measurement, different units, without a change in the size or amount e.g. millimetres to centimetres

Operations	
Key Vocabulary	
Operations	The 4 operations are addition, subtraction, multiplication and division
Efficient method	A method that gets an accurate answer but involves limited calculations
Product	Two numbers multiplies e.g. the product of 6 and 4 is 24
Inverse	Opposite operation e.g. +/- and x/÷
Substitute	One way to solve systems of equations is by substitution. In this method, solve an equation for one variable, then substitute that solution in the other equation, and solve

Fluency, Reasoning and Problem Solving	
Key Vocabulary	
Fluency	Using number and calculation skills accurately and efficiently
Reasoning	Following a line of enquiry, justifying their answers
Problem solving	Solving real life and logical problems using mathematical understanding
Derive	Obtain something from something else- use the information given to find out something else

Data handling, shape and space	
Key Vocabulary	
Carroll diagram and Venn diagram	Carroll diagram: A table to organise information with yes or no questions Venn diagram: A diagram representing mathematical or logical sets pictorially
Frequency diagram	The frequency of a particular data value is the number of times the data value occurs. Often recorded using tallies
Bar chart	A diagram in which the numerical values of variables are represented by the height or length of lines or rectangles of equal width
Line chart/graph	A type of chart which displays information as a series of data points called 'markers' connected by straight line segments
Pie chart	A type of graph in which a circle is divided into sectors that each represent a proportion of the whole
Continuous data	Data that can take any value (within a range) e.g. People's heights could be any value (within the range of human heights), not just certain fixed heights
Horizontal/vertical	A horizontal line is one which runs from left to right across the page. The vertical line runs up and down the page
Quadrants, x-axis/y-axis	...dinate plane is a two-dimensional number line where the vertical line is ...he y-axis and the horizontal is called the x-axis. These lines are ...dicular and intersect at their zero points. This point is called the origin. ...s divide the plane into four quadrant
Translation	A term used in geometry to describe a function that moves an object a certain distance. The object is not altered in any other way. It is not rotated, reflected or re-sized.
Dimension	A square describes two dimensions, and a cube describes three dimensions
Perimeter, area	Perimeter is the distance around a two dimensional shape. Area is the amount of space inside the flat (2-dimensional) object such as a triangle or circle
Reflex angle	An angle which is more than 180° but less than 360°
Perpendicular	Perpendicular means "at right angles". A line meeting another at a right angle, or 90° is said to be perpendicular to it
Parallel	Two lines that are always the same distance apart and never touch
Circumference, diameter, radius	Circumference: distance around a curved object e.g. circle Diameter: distance measured across the circle passing through the centre Radius: distance from the centre of a circle to the outside edge

How to help:	**Useful links:**
• Support your child with their Maths homework • Encourage them to tell the time • Practise times tables up to 12x • Count forwards and backwards in different sized jumps (including within negatives) and from different starting points • Play board games e.g. Snakes and Ladders	**National Curriculum-** on the school website **Maths Calculation Strategies documents- o**n the school website **Top Marks Website**- maths games to play with your child **ICT Games Website**- maths games to play with your child