KNOWLEDGE ORGANISER

Year 7 – Maths – AC1

Excellence. No Excuses.

Number 1		
1	An integer is	a whole number
2	Inequality signs are	>, < ≤, ≥
3	A numerator is	the top number of a fraction
4	A denominator is	the bottom number of a fraction
5	Equivalent fractions	have the same value but use different numbers
6	To round a number	you shorten or simplify it whilst keeping it close to its original value
Algebra 1		
7	An Expression has	at least one letter, an operation and no equal sign
8	Simplifying	is replacing a **mathematical** expression by an equivalent one, that is simpler (usually shorter)
9	A term is	a single number or variable, or numbers and variables multiplied together.
10	Substitute means	to replace a letter by a number
11	Expand means	getting rid of brackets by multiplying
12	An equation contains	at least one letter, an equal sign and can be solved
13	Coefficient is	the number in front of a letter

Statistics 1		
14	Mode is	the most frequent data value
15	Median is	then middle number when values are in order.
16	Mean is	adding up all the values and dividing by how many values there are
17	Range is	Biggest value – smallest value
18	Discrete data is	data that takes exact values
19	Continuous data is	data that is measured
2D, 3D Shapes and Measurements		
20	Acute angles are	less than 90°
21	Obtuse angles are	greater than 90^o but less than 180^o
22	Reflex angles are	greater than 180^o but less than 360^o
23	Right angles are	exactly 90°
24	Parallel lines are	lines that if continued would never meet
25	Perpendicular Lines are	lines that meet at a right angle
26	Symmetry objects are	identical either side of a line of symmetry or reflection line
27	Rotational symmetry is	how many times an object looks identical when rotated through 360°

VOCABULARY

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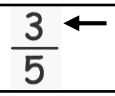
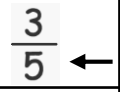
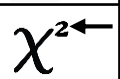
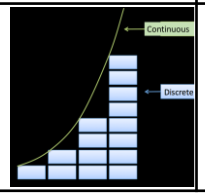
Word	Definition	Synonyms	Antonyms	Etymology
Integer 	An integer is a whole number that can be positive, negative or zero.	• **Digit** • **Number** • **Whole number**	• Part • Decimal • Fragment	1570's From the Latin word '***Integer***' meaning intact, whole or complete.
Calculate 	To determine the amount or number of something mathematically.	• **Compute** • **Determine** • **Work out**	• Estimate • Guess • Miscalculate	1560's Latin ***Calculare***- 'to reckon or compute'
Inequality 	A mathematical sentence in which the left side does not equal the right side.	• **Imbalance** • **Inequity** • **Disproportion**	• Balance • Equality	Early 15th Century originating from the Latin word *'**Inequalitas**' meaning unalike.*
Product 	The result of multiplying two or more numbers together.	• **Multiply** • **Times**	• Decrease • Divide	From the Medieval Latin word *'**Productum***' meaning something produced.
Numerator 	The number on the top of a fraction.	• **Figure** • **Dividend**	• Denominator	Originating in Latin ***'Numerus'*** meaning counter number.
Denominator 	The number on the bottom of fraction.	• **Total** • **Sum**	• Numerator	Derived from the Latin word '***Denomino'*** meaning to name.
Squared 	To multiply a number, term or expression my itself.	• **Multiplied** • **Increase**	• Square root	Originating from old Latin ***'Quadra'*** meaning square.
Vertex 	A corner point or a point where lines meet.	• **Peak** • **Tip**	• Base • Edge	1560's Latin '***Vertex'*** meaning the highest point or the turning point.
Edge 	A line segment showing a boundary, often referred to as a side.	• **Border** • **Boundary** • **Margin**	• Interior • Middle • Centre	Sourced from old English routes used to describe the sharpened edge of a blade.
Discrete	Discrete values are limited eg shoe sizes, favourite colours	• **Disconnected** • **Distinct** • **Detatched**	• Continuous • Connected • Attached	late 14c., from Old French *discret*, *discre*, and directly from Latin *discretus* "separated;" Separate, distinct from others.
Continuous 	Characterized by continuity, not affected by disconnection or interruption. Continuous measurements are defined as values whose measurement can be improved with more accurate measuring equipment	• **Connected** • **Attached** • **Unending**	• Discrete • Disconnected • Distinct	1640s, from French *continueus* or directly from Latin *continuus* "joining, connecting with something; following one after another