

**Year 9 THRESHOLD CRITERIA**

**MATHS**

	<b>AO1</b>	<b>AO2</b>	<b>A03</b>	<b>AO4</b>
	Number	Geometry and Measures	Algebra	Statistics and Probability
<b>EXCELLENT</b>	Upper and lower bounds Standard form Recurring decimals and reciprocals Reverse percentages Proportional reasoning Indices and Surds	Converting units Dimensional analysis Arcs and sectors Similar shapes Fractional scale factors Pythagoras Theorem Right angled trigonometry	Index laws Identities Parallel and perpendicular lines quadratic, cubic and reciprocal graphs Simultaneous equations Solving inequalities Finding the nth term of Quadratic Sequences	Moving averages Cumulative frequency Box plots Use of set notation for Venn Diagrams Predictions
<b>PROFICIENT</b>	Using indices Using SF to estimate calculations Multiply/divide mixed numbers Solving problems involving % change Using a calculator in context Negative numbers Working with decimals Algebra and proportion	Enlargements with a centre Describe transformations Isometric drawings of shapes made with cubes Volume/surface area of prisms including cylinders	Rearranging formulae Expanding double brackets Algebraic fractions Quadratic graphs Mid point of co-ordinate pairs Time series Equations with fractions Trial and improvement Real life equations Recursive sequence Nth term of simple quadratic	Congruency & similarity Area circumference of circle Imperial measures Comparing distributions Tree diagrams 2 or more events
<b>DEVELOPING</b>	Know cube numbers and roots LCM HCF Prime factor decomposition Other special numbers Recall of all times tables Convert freely between FDP + - fractions with mixed denominators Working with mixed number fractions Simple % increase/decrease Prime factor decomposition Significant figures Solving problems involving ratio, direct and	Constructing bisector Simple Loci Plans and elevations Using scale factors (maps etc) Enlargement with positive scale factor Plans and elevations Volume of common prisms	Substitution into complex expressions/formulae Factorising expressions Writing formulae from words Understanding of $y=mx+c$ Draw harder graphs eg $2x+3y=12$ Equations with unknown on both sides Constructing equations from words Finding a rule for nonlinear sequences	Area of a trapezium Surface area of a cuboid Angles in parallel lines Angles in polygons Averages from a table Design a questionnaire Scatter diagrams Stem & Leaf Working with Venn diagrams with 3 sets of data

	inverse proportion Using ratio to compare proportion (as fraction)		Sequences in context	
<b>ACQUIRING</b>	Negative numbers Calculator methods Knowledge of times tables + - fractions Building percentages Rounding to decimal places Listing multiples and factors Know square numbers Recognise some prime numbers Written methods of multiplication/division LCM HCF BIDMAS Prime numbers Rounding to given number of DP Dividing in a given ratio Calculations involving money eg best value	Translate, reflect, rotate on a grid Constructing a triangle using angle measurer Simple scale drawings Isometric drawings Nets of simple 3D shapes Volume of a cuboid Isometric drawings of cubes/cuboids Volume/surface area of cuboid	Simplifying expressions involving brackets Use/write simple formulae Recognising vertical/horizontal lines eg $y=3$ Generate co-ordinates for straight line graph Interpret real life graph Solving 2 step equations Multiplying/Dividing terms Equations with single pair of brackets Finding nth term of linear sequence Geometric sequences	Volume of a cuboid Area of triangle/parallelogram Convert between simple metric units Properties of triangles and quadrilaterals Angles around a point Comparing sets of data Reading and interpreting pie charts Understanding unions and intersections Assigning probabilities based on experiments Listing outcomes