Maths- Y10H

HALF TERM 5 April- May	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	
TOPIC (S)	Properties of Polygons	Properties of Polygons	Linear and Quadratic Equations and their Graphs	Linear and Quadratic Equations and their Graphs	Transformations	Transformations	

Knowledge & Skills development	**Properties of Polygons**
	
	• derive and use the sum of angles in a triangle (eg to deduce and use the angle sum in any polygon, and to derive properties of regular polygons)
	• derive and apply the properties and definitions of:
	    o special types of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus
	    o triangles using appropriate language (including names and properties of isosceles, equilateral, scalene, right-angled, acute-angled and obtuse-angled triangles)
	• other plane figures using appropriate language
	
	Linear and Quadratic Equations and their Graphs
	• solve linear equations in one unknown algebraically, including those with the unknown on both sides of the equation
	• solve quadratic equations algebraically by: factorising
	• find approximate solutions using a graph: both linear and quadratic
	• translate simple situations or procedures into algebraic expressions or formulae
	• derive an equation, solve the equation and interpret the solution
	
	Transformations
	• identify, describe and construct congruent and similar shapes, including on coordinate axes, by considering:
	    o rotation
	    o reflection
	    o translation
	    o enlargement
	    o enlargement including fractional scale factors
	    o enlargement including negative scale factors
	• describe translations as 2D vectors
	• describe the changes and invariance achieved by combinations of rotations, reflections and translations (including using column vector notation for translations)							

Assessment / Feedback Opportunities	Topic assessments	Self-assessment sheets	Homework (written and online)	Formative teacher assessment - verbal	Retrieval practice	
Cultural Capital	Application of geometry in real lie problems e.g transformations used in computer games Use of algebra to enable us to solve problems in unknowns- medical formulae					
SMSC / Promoting British Values (Democracy, Liberty, Rule of Law, Tolerance & Respect)	Willingness to participate in, and respond to mathematical opportunities. Use of social skills in different contexts, including working and socialising with pupils from different religious, ethnic and socio-economic backgrounds.					
Reading opportunities	What's the point of maths? Murderous Maths, Marvellous Maths, Launch a rocket into space, Humble Pi.					
Key Vocabulary	Polygon, regular, irregular, equal, interior, exterior, equation, formula, expression, identity, solve, unknown, inverse operation, factorise, solution, linear, quadratic, graphical, transformation, reflection, rotation, enlargement, translation, centre, vector, scale factor, similar, congruent, recurring, terminating, equivalent, limits, bounds, error intervals, truncating, sequence, linear, quadratic, nth term.					
Digital Literacy	Desmos, DFM, MSTeams, Geogbra.					
Careers	Engineering, Business, Architecture, Building, Gaming, Banking, Economist, Statistician, Budgeting, Market Research.					