Maths- Y10H

HALF TERM 2 NOV - DEC	Week 1 w/b 4th Nov	Week 2 w/b 11th Nov	Week 3 w/b 18th Nov	Week 4 w/b 25th Nov	Week 5 w/b 2nd Dec	Week 6 w/b 9th Dec	Week 7 w/b 16th Dec
TOPIC (S)	Surds	Surds (Standard Form recap)	Assessment	Constructions and Loci	Congruence and Similarity	Congruence and Similarity	Algebra Recap and Extension
Knowledge & Skills development	**Surds** calculate exactly with surds simplify surd expressions involving squares e.g. $\sqrt{12} = \sqrt{(4 \times 3)} = \sqrt{4} \times \sqrt{3} = 2\sqrt{3}$ and rationalise denominators recognise and use simple geometric progressions (r^n where n is an integer and r is a surd) **Standard Form recap** understand and use place value (eg when working with very large or very small numbers) calculate with and interpret standard form $A \times 10^n$, where $1 \le A < 10$ and n is an integer • with and without a calculator • interpret calculator displays **Constructions and Loci** use the standard ruler and compass constructions: • perpendicular bisector of a line segment • constructing a perpendicular to a given line from/at a given point • bisecting a given angle know that the perpendicular distance from a point to a line is the shortest distance to the line use the standard ruler and compass constructions to construct given figures and solve loci problems **Congruence and Similarity** use the basic congruence criteria for triangles (SSS, SAS, ASA, RHS) apply angle facts, triangle congruence, similarity and properties of quadrilaterals to conjecture and derive results about angles and sides, including: • Pythagoras' theorem • the fact that the base angles of an isosceles triangle are equal • use known results to obtain simple proofs apply the concepts of congruence and similarity, including the relationships between lengths, areas and volumes in similar figures **Algebra recap and extension** Solve linear equations in one unknown algebraically including those with the unknown on both sides of the equation Use the form y = mx + c to identify parallel lines **and perpendicular lines** Find the equation of the line through two given points, or through one point with a given gradient							

Assessment / Feedback Opportunities	Topic assessments	Self-assessment sheets	Homework	Formative teacher assessment - verbal	Retrieval practice	
Cultural Capital	Use of standard form in science Real life application of Construction and Loci Collating evidence to support proofs					
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? Humble Pi					
Key Vocabulary	Surds, rationalise, standard form, index, place value, integer, construction, locus, loci, perpendicular, bisect, equidistant, congruent, similar, proof, scale factor, expressions, equations, formulae, identities, inequalities, terms, factors, gradient, reciprocal.					
Digital Literacy	Geogebra					
Careers	Engineering, Business, Medical, Science.					