Maths- Y11F

HALF TERM 2 NOV - DEC	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7 and 8
TOPIC (S)	Trigonometry	Trigonometry	Volume	Volume	Revision and Exam Practice	Mocks	Mocks
Knowledge & Skills development	**Trigonometry** Know and use the trigonometric ratios, $\sin\theta = \frac{opposite}{hypotenuse}$ $\cos\theta = \frac{adjacent}{hypotenuse}$ and $\tan\theta = \frac{opposite}{adjacent}$ apply them to find angles and lengths in right-angled triangles in two dimensional figures know the exact values of $\sin\theta$ and $\cos\theta$ for θ = 0°, 30°, 45°, 60° and 90° know the exact value of $\tan\theta$ for θ = 0°, 30°, 45°, 60° compare lengths using ratio notation make links to trigonometric ratios **Volume** compare lengths, areas and volumes using: • ratio notation • scale factors (linked to similar shapes) make links to similarity (including trigonometric ratios) know and apply formulae to calculate volume of: • cuboids • other right prisms (including cylinders) Calculate the volume of: • spheres • pyramids • cones • composite solids calculate exactly with multiples of π							
Assessment / Feedback Opportunities	Topic assessments	Self-assessment sheets	Homework	Formative teacher assessment - verbal	Retrieval practice		
Cultural Capital	Use of Volume to solve real life problems involving capacity Application of trigonometry in real life problems including construction Discussion of the use of algebra and graphs in real life including science and finance						

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	Mathematics in the Simpsons What's the point of Maths Humble Pi
Key Vocabulary	Trigonometry, Pythagoras, hypotenuse, opposite, adjacent, tangent, sine, cosine, ratio, volume, unit, capacity, similar, cross-section.
Digital Literacy	Microsoft Excel, DESMOS, Geogebra
Careers	Architecture, Team Leader, Construction, Chef, Medicine, Engineer.