



HALF TERM 2 NOV - DEC	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
TOPIC (S)	Trigonometry	Trigonometry	Volume	Volume	Algebra and Graphs	Algebra and Graphs	Review and Revision
Knowledge & Skills development	<p><b>Trigonometry</b>            Know and use the trigonometric ratios, <math>\sin\theta = \frac{\textit{opposite}}{\textit{hypotenuse}}</math>   <math>\cos\theta = \frac{\textit{adjacent}}{\textit{hypotenuse}}</math>   and   <math>\tan\theta = \frac{\textit{opposite}}{\textit{adjacent}}</math></p> <p>apply them to find angles and lengths in right-angled triangles in two dimensional figures            know the exact values of <math>\sin\theta</math> and <math>\cos\theta</math> for <math>\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ</math> and <math>90^\circ</math>            know the exact value of <math>\tan\theta</math> for <math>\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ</math>            compare lengths using ratio notation            make links to trigonometric ratios</p> <p><b>Volume</b>            compare lengths, areas and volumes using:</p> <ul style="list-style-type: none"> <li>ratio notation</li> <li>scale factors (linked to similar shapes)</li> </ul> <p>make links to similarity (including trigonometric ratios)            know and apply formulae to calculate volume of:</p> <ul style="list-style-type: none"> <li>cuboids</li> <li>other right prisms (including cylinders)</li> </ul> <p>Calculate the volume of:</p> <ul style="list-style-type: none"> <li>spheres</li> <li>pyramids</li> <li>cones</li> <li>composite solids</li> </ul> <p>calculate exactly with multiples of <math>\pi</math></p> <p><b>Algebra and Graphs</b>            solve linear equations:</p> <ul style="list-style-type: none"> <li>in one unknown algebraically</li> <li>including those with the unknown on both sides of the equation</li> </ul> <p>find approximate solutions using a graph            translate simple situations or procedures into algebraic expressions or formulae            derive an equation (or two simultaneous equations), solve the equation(s) and interpret the solution</p>						

<b>Assessment / Feedback Opportunities</b>	Topic assessments	Self-assessment sheets	Homework	Formative teacher assessment - verbal	Retrieval practice	
<b>Cultural Capital</b>	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					
<b>SMSC / Promoting British Values</b> (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.					
<b>Reading opportunities</b>	Mathematics in the Simpsons What's the point of Maths Humble Pi					
<b>Key Vocabulary</b>	Trigonometry, Pythagoras, hypotenuse, opposite, adjacent, tangent, sine, cosine, ratio, volume, unit, capacity, similar, cross-section, equation, expression, identity, inequality, formula, interpret, solution.					
<b>Digital Literacy</b>	Microsoft Excel, DESMOS, Geogebra					
<b>Careers</b>	Architecture, Team Leader, Construction, Chef, Medicine, Engineer.					