



# Maths- Y11H

## MAGHULL HIGH SCHOOL – CURRICULUM MAP

HALF TERM 4 FEB-MAR	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	
TOPIC (S)	Circle Theorems	Circle Theorems	Mock Exams	Mock Exams	Further Sketching Graphs	Transforming Functions	
Knowledge & Skills development	<p><b>Circle Theorems</b>            apply and prove the standard circle theorems concerning:</p> <ul style="list-style-type: none"> <li>• angles and radii</li> <li>• tangents and chords</li> </ul> use them to prove related results						
	<p><b>Further Sketching Graphs</b></p> <ul style="list-style-type: none"> <li>• Recognise, sketch and interpret graphs of linear functions, quadratic functions, simple cubic functions, and the reciprocal function <math>y=1/x</math> with <math>x \neq 0</math></li> <li>• exponential functions <math>y = k^x</math> for positive values of <math>k</math>,</li> <li>• and the trigonometric functions (with arguments in degrees) <math>y=\sin x</math>, <math>y=\cos x</math> and <math>y=\tan x</math> for angles of any size (including using the symmetry of functions)</li> </ul>						
	<p><b>Transforming Functions</b></p> <ul style="list-style-type: none"> <li>• sketch translations and reflections of a given function</li> </ul>						
	<p><b>Algebraic Fractions</b></p> <ul style="list-style-type: none"> <li>• simplify and manipulate algebraic expressions involving algebraic fractions by:</li> <li>• expanding products of two or more binomials</li> <li>• factorising quadratic expressions of the form <math>ax^2 + bx + c</math></li> </ul>						

<b>Assessment / Feedback Opportunities</b>	Topic assessments	Self-assessment sheets	Homework	Formative teacher assessment - verbal	Retrieval practice	
<b>Cultural Capital</b>	Exponential growth of diseases. Proving a statement with clear evidence.					
<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 in Maths? Humble pi					
<b>Key Vocabulary</b>	Circle, Theorem, Radii, Tangent, Segment, Subtend, Arc, Chord, Diameter, Proof, Graph, Sketch, Plot, Axis, Intercept, Shape, Linear, Quadratic, Reciprocal, Cubic, Exponential, Solutions, Equation, Function, Roots, Turning Points, Period, Cycle, Repeat, Asymptote, Reflect, Translate, Simplify, Solve, Manipulate, Factorise,					
<b>Digital Literacy</b>	DESMOS, Geogebra, DFM, MSTeams					
<b>Careers</b>	Architecture, Team Leader, Construction, Medicine, Engineer, Science, Finance, Chemist, Nursing, Machinists, Actuaries, Statistician					