







**GCSE Mathematics**  
**Revision List (Higher)**







**24<sup>th</sup> May:** Paper 1 - Non-Calculator

**7<sup>th</sup> June:** Paper 2 – Calculator

**12<sup>th</sup> June:** Paper 3 – Calculator

Topic List	Hegarty Maths Clip Numbers			
<b>Basic Skills</b>				
Negative Numbers: Four Operations	<a href="#">41</a> , <a href="#">42</a> , <a href="#">43</a> , <a href="#">44</a>			
Add and Subtract Fractions and Mixed Numbers	<a href="#">63</a> , <a href="#">64</a> , <a href="#">66</a>			
Multiplication and Division of Fractions	<a href="#">67</a> , <a href="#">68</a> , <a href="#">69</a> , <a href="#">70</a> , <a href="#">71</a> , <a href="#">72</a>			
Multiplication and Division of Decimal Numbers	<a href="#">48</a> , <a href="#">49</a> , <a href="#">50</a>			
Basic Percentages: Non-Calculator and Calculator	<a href="#">84</a> , <a href="#">85</a> , <a href="#">86</a> , <a href="#">87</a>			
Fraction, Decimal and Percentage Conversions	<a href="#">52</a> , <a href="#">55</a> , <a href="#">74</a> , <a href="#">76</a> , <a href="#">82</a> , <a href="#">83</a> , <a href="#">149</a>			
<b>Number</b>				
Estimation and Significant Figures	<a href="#">130</a> , <a href="#">131</a>			
Basic Index Laws	<a href="#">103</a> , <a href="#">105</a> , <a href="#">106</a> , <a href="#">107</a>			
Fractional and Negative Index Laws	<a href="#">104</a> , <a href="#">108</a> , <a href="#">109</a> , <a href="#">110</a>			
Standard Form Calculations	<a href="#">124</a> , <a href="#">125</a> , <a href="#">126</a> , <a href="#">127</a>			
Surds: The Basics - Simplifying, Multiplying, Dividing	<a href="#">112</a> , <a href="#">113</a> , <a href="#">114</a> , <a href="#">115</a>			
Surds: Expanding Brackets	<a href="#">116</a> , <a href="#">117</a>			
Surds: Rationalising the Denominator	<a href="#">118</a> , <a href="#">119</a>			
<b>Algebra</b>				
Forming Algebraic Expressions and Formulae	<a href="#">150</a> , <a href="#">151</a> , <a href="#">153</a> , <a href="#">155</a>			
Equations, Expressions, Identities and Formulae	<a href="#">154</a>			
Simplifying Algebraic Expressions, including Brackets	<a href="#">157</a> , <a href="#">158</a> , <a href="#">159</a> , <a href="#">160</a> , <a href="#">161</a>			
Expanding Double Brackets	<a href="#">162</a> , <a href="#">163</a> , <a href="#">164</a> , <a href="#">165</a>			
Expanding Triple Brackets	<a href="#">166</a>			
Factorising Single Brackets	<a href="#">167</a> , <a href="#">168</a> , <a href="#">169</a>			
Simplifying Expressions by Factorising	<a href="#">170</a> , <a href="#">171</a>			
Factorising Double Brackets: Quadratic Expressions	<a href="#">223</a> , <a href="#">224</a> , <a href="#">225</a> , <a href="#">226</a> , <a href="#">227</a> , <a href="#">228</a>			
Simplifying Expressions using the Index Laws	<a href="#">173</a> , <a href="#">174</a> , <a href="#">175</a>			
Linear Sequences: $n^{\text{th}}$ Term Rule	<a href="#">196</a> , <a href="#">197</a> , <a href="#">198</a>			
Quadratic Sequences: $n^{\text{th}}$ Term Rule	<a href="#">247</a> , <a href="#">248</a> , <a href="#">249</a> , <a href="#">250</a>			
Other Sequences: Fibonacci, Geometric, Recurrence	<a href="#">261</a> , <a href="#">262</a> , <a href="#">263</a> , <a href="#">264</a>			
Solving Linear Equations	<a href="#">179</a> , <a href="#">180</a> , <a href="#">181</a> , <a href="#">182</a> , <a href="#">183</a>			
Solving Linear Equations: Unknown on Both Sides	<a href="#">184</a> , <a href="#">185</a> , <a href="#">186</a>			
Forming and Solving Linear Equations	<a href="#">176</a> , <a href="#">188</a>			
Solving Quadratic Equations by Factorisation	<a href="#">230</a> , <a href="#">231</a> , <a href="#">232</a> , <a href="#">233</a> , <a href="#">234</a>			
Solving Quadratic Equations using the Formula	<a href="#">241</a> , <a href="#">242</a>			

Topic List	Hegarty Maths Clip Numbers			
<b>Algebra (continued)</b>				
Rearranging Formulae	<a href="#">280</a> , <a href="#">281</a> , <a href="#">282</a> , <a href="#">283</a> , <a href="#">284</a>			
Substitution into Equations and Formulae	<a href="#">189</a> , <a href="#">278</a> , <a href="#">279</a> , <a href="#">287</a>			
Linear Graphs: Drawing Straight Line Graphs	<a href="#">205</a> , <a href="#">206</a>			
Linear Graphs: Equation of a Straight Line, $y = mx + c$	<a href="#">207</a> , <a href="#">208</a> , <a href="#">209</a> , <a href="#">210</a> , <a href="#">211</a> , <a href="#">212</a> , <a href="#">213</a>			
Midpoint and Gradient of a Line Segment	<a href="#">200</a> , <a href="#">201</a> , <a href="#">202</a> , <a href="#">203</a> , <a href="#">204</a>			
Quadratic Graphs: Drawing Quadratic Graphs	<a href="#">251</a>			
Quadratic Graphs: Properties of Quadratic Graphs	<a href="#">252</a> , <a href="#">253</a> , <a href="#">254</a> , <a href="#">255</a> , <a href="#">256</a> , <a href="#">257</a>			
Solving Linear and Quadratic Equations using Graphs	<a href="#">217</a> , <a href="#">260</a>			
Algebraic Proof	<a href="#">325</a> , <a href="#">326</a>			
<b>Geometry and Measures</b>				
Angles on Parallel Lines	<a href="#">481</a> , <a href="#">482</a> , <a href="#">483</a>			
Solving Multi-Step Angle Problems	<a href="#">488</a> , <a href="#">489</a> , <a href="#">490</a> , <a href="#">491</a>			
Angles in Polygons (Interior and Exterior Angles)	<a href="#">561</a> , <a href="#">562</a> , <a href="#">563</a> , <a href="#">564</a>			
Forming and Solving Equations with Angles	<a href="#">487</a> , <a href="#">565</a>			
Compound and Algebraic Perimeter	<a href="#">551</a> , <a href="#">552</a>			
Area of Rectangles, Triangles, Trapezia, Parallelograms	<a href="#">555</a> , <a href="#">556</a> , <a href="#">558</a> , <a href="#">559</a>			
Circumference and Area of a Circle: The Basics	<a href="#">534</a> , <a href="#">535</a> , <a href="#">539</a> , <a href="#">540</a>			
Perimeter and Area of Semi-Circles and Quarter-Circles	<a href="#">536</a> , <a href="#">541</a>			
Circumference and Area of a Circle: Problem Solving	<a href="#">537</a> , <a href="#">538</a> , <a href="#">542</a> , <a href="#">543</a>			
Arc Length and Area of Circle Sectors	<a href="#">544</a> , <a href="#">545</a> , <a href="#">546</a> , <a href="#">547</a>			
Pythagoras' Theorem: The Basics (including with Surds)	<a href="#">498</a> , <a href="#">499</a> , <a href="#">500</a>			
Pythagoras' Theorem: Problem Solving	<a href="#">501</a> , <a href="#">502</a> , <a href="#">503</a> , <a href="#">504</a>			
Trigonometry in Right-Angled Triangles: The Basics	<a href="#">508</a> , <a href="#">509</a> , <a href="#">510</a> , <a href="#">511</a> , <a href="#">512</a>			
Trigonometry in Right-Angled Triangles: Problem Solving	<a href="#">513</a> , <a href="#">514</a> , <a href="#">515</a>			
3D Pythagoras' Theorem and Trigonometry	<a href="#">505</a> , <a href="#">506</a> , <a href="#">507</a>			
Volume of Prisms and Cylinders: The Basics	<a href="#">569</a> , <a href="#">571</a> , <a href="#">572</a>			
Volume of Prisms and Cylinders: Problem Solving	<a href="#">573</a> , <a href="#">574</a> , <a href="#">575</a>			
Similar Shapes: Lengths - The Basics	<a href="#">609</a> , <a href="#">610</a> , <a href="#">611</a> , <a href="#">612</a> , <a href="#">613</a>			
Similar Shapes: Areas and Volumes - The Basics	<a href="#">615</a> , <a href="#">616</a> , <a href="#">618</a> , <a href="#">619</a> , <a href="#">620</a>			
Similar Shapes: Problem Solving	<a href="#">614</a> , <a href="#">617</a> , <a href="#">621</a>			
Vectors (an introduction)	622, 623, 624, 625, 626, 627			
Vectors (simple geometry problems)	628, 629			
Vectors (advanced exam style)	630, 631, 632, 633, 634, 635, 636			
<b>Probability</b>				
Single Event Probability	<a href="#">350</a> , <a href="#">351</a> , <a href="#">352</a> , <a href="#">353</a>			
Experimental Probability (Relative Frequency)	<a href="#">355</a> , <a href="#">356</a> , <a href="#">357</a>			
Combined Event Probability (Sample Space Diagrams)	<a href="#">358</a> , <a href="#">359</a>			

Mutually Exclusive and Independent Events	<a href="#">354</a> , <a href="#">360</a>			
Probability Tree Diagrams	<a href="#">355</a> , <a href="#">356</a> , <a href="#">357</a>			
Probability Tree Diagrams: Conditional Probability	<a href="#">358</a> , <a href="#">359</a> , <a href="#">360</a>			
<b>Topic List</b>	<b>Hegarty Maths Clip Numbers</b>			
<b>Probability (continued)</b>				
Frequency Tree Diagrams	<a href="#">368</a> , <a href="#">369</a>			
Introduction to Set Theory: Set Notation	<a href="#">370</a> , <a href="#">371</a>			
Sets and Venn Diagrams	<a href="#">372</a> , <a href="#">373</a> , <a href="#">374</a> , <a href="#">375</a> , <a href="#">376</a>			
Probability from Venn Diagrams	<a href="#">383</a> , <a href="#">384</a>			
<b>Extension Section</b>	<b>Hegarty Maths Clip Numbers</b>			
<b>Algebra: Extension Topics</b>				
Algebraic Fractions (including Solving Equations)	<a href="#">172</a> , <a href="#">187</a> , <a href="#">229</a> , <a href="#">244</a>			
Simultaneous Linear Equations	<a href="#">190</a> , <a href="#">191</a> , <a href="#">192</a> , <a href="#">193</a> , <a href="#">194</a>			
Forming and Solving Simultaneous Linear Equations	<a href="#">195</a>			
Solving Simultaneous Linear Equations using Graphs	<a href="#">218</a> , <a href="#">219</a>			
Linear Graphs: Parallel and Perpendicular Lines	<a href="#">214</a> , <a href="#">215</a> , <a href="#">216</a>			
Linear Graphs: Using the form $ax + by + c = 0$	<a href="#">220</a>			
Quadratic Equations: Completing the Square	<a href="#">235</a> , <a href="#">236</a> , <a href="#">237</a> , <a href="#">238</a> , <a href="#">239</a> , <a href="#">256</a>			
Quadratic Equations and Graphs: Using the Discriminant	<a href="#">243</a> , <a href="#">258</a>			
Forming and Solving Quadratic Equations	<a href="#">244</a>			
Simultaneous Equations involving a Quadratic Equation	<a href="#">245</a> , <a href="#">259</a>			
Linear Inequalities: Representing on a Number Line	<a href="#">265</a> , <a href="#">266</a> , <a href="#">267</a> , <a href="#">268</a>			
Solving Linear Inequalities	<a href="#">269</a> , <a href="#">270</a> , <a href="#">271</a> , <a href="#">272</a>			
Linear Inequalities: Regions on a Graph	<a href="#">273</a> , <a href="#">274</a> , <a href="#">275</a> , <a href="#">276</a>			
Quadratic Inequalities	<a href="#">277</a>			
Rearranging Formulae: Advanced	<a href="#">285</a> , <a href="#">286</a>			
Functions: Basic Notation, Domain and Range	<a href="#">288</a> , <a href="#">289</a> , <a href="#">290</a> , <a href="#">291</a> , <a href="#">292</a>			
Functions: Inverse and Composite Functions	<a href="#">293</a> , <a href="#">294</a> , <a href="#">295</a> , <a href="#">296</a> , <a href="#">297</a>			
<b>Geometry and Measures: Extension Topics</b>				
Trigonometry in Non-Right Angled Triangles: $\frac{1}{2}ab\sin C$	<a href="#">517</a> , <a href="#">518</a> , <a href="#">519</a>			
Sine Rule: The Basics	<a href="#">521</a> , <a href="#">522</a> , <a href="#">523</a> , <a href="#">524</a> , <a href="#">525</a>			
Cosine Rule: The Basics	<a href="#">527</a> , <a href="#">528</a> , <a href="#">529</a> , <a href="#">530</a>			
Sine and Cosine Rules: Problem Solving	<a href="#">532</a> , <a href="#">533</a>			
Volume of Cones, Spheres and Pyramids: The Basics	<a href="#">576</a> , <a href="#">577</a> , <a href="#">578</a> , <a href="#">579</a> , <a href="#">580</a> , <a href="#">581</a>			
Advanced Volume: Problem Solving	<a href="#">582</a> , <a href="#">583</a>			
Circle Theorems: Angles inside a Circle	<a href="#">593</a> , <a href="#">594</a> , <a href="#">595</a> , <a href="#">596</a> , <a href="#">597</a>			
Circle Theorems: Tangents and Chords	<a href="#">598</a> , <a href="#">599</a> , <a href="#">600</a> , <a href="#">601</a> , <a href="#">602</a>			
Circle Theorems: Problem Solving	<a href="#">603</a> , <a href="#">604</a> , <a href="#">605</a> , <a href="#">606</a>			