

MathsWatch

The Year 10 scheme of learning is broken down into units of work based on the AQA examination specification for Mathematics. On the following pages, term-by-term, you will see the general content of each unit together with some links to our MathsWatch subscription package. Each link will take you to the appropriate page on the MathsWatch website (vle.mathswatch.co.uk). To access the page you may need to enter your username (school login number followed by @belper such as 12345@belper) and your password is belper unless you have already changed it. You may also need to refresh the page. Please contact your Maths teacher directly if you have any problems accessing the website.

The week numbers are there as a guide to what you should be doing at that stage of the school year but do not feel that you have to stick precisely to these times. On each link, there is a video explaining the topic as well as interactive questions, which you can access by clicking on the tab at the top of the video screen. For some questions you will need to use interactive tools (protractor, ruler, etc) so be sure to use the 'extras' tab at the top of the page which links into tips and tutorials on how to use them effectively. Remember that your teachers are here to help so contact them if you need any help.

Each unit is divided into two sections. The top section has links to material that is included at both Foundation tier and Higher tier. **The bottom section is only for those students who are hoping to sit the final GCSE exam at Higher tier.** It is usual for many students to be unsure about which tier they will be doing so my advice for **all students** would be to start with the top section and if you are able to answer most of the questions confidently, then you should be looking at the bottom section too. If you are still unsure, please e-mail your teacher for further advice as they will know you best.

For each link be sure to watch the videos closely but do not worry if you cannot complete all of the interactive questions (make sure you look out for the green 'HINTS' option on some questions). Some tasks will be too easy; some may be too hard – just try your best.

Other resources

Of course, MathsWatch is not the only resource out there to help you with your mathematics and you may have other resources (such as revision guides) that will help you to keep up to date with the scheme of learning. Some other noteworthy on-line resources include:



MyMaths (www.mymaths.co.uk) login: belper and password: shape



Hegarty Maths <http://mathswebsite.com>

You will need to register to login but it is FREE! Great videos explaining how to do every topic!



Corbett Maths <https://corbettmaths.com/>

As well as questions (with answers!) to try, this also has videos and revision cards.

Week Number	Unit of Work	Year 10 Autumn Term MathsWatch Resources
1 2	Number 1	Ordering integers https://vle.mathswatch.co.uk/vle/browse/154 BIDMAS https://vle.mathswatch.co.uk/vle/browse/233 Multiplying integers https://vle.mathswatch.co.uk/vle/browse/173 Dividing integers https://vle.mathswatch.co.uk/vle/browse/174 Negatives in real-life https://vle.mathswatch.co.uk/vle/browse/178 Adding/subtracting negatives https://vle.mathswatch.co.uk/vle/browse/224 Multiply/divide negatives https://vle.mathswatch.co.uk/vle/browse/225 Factors, multiples and primes https://vle.mathswatch.co.uk/vle/browse/183 Product of prime factors https://vle.mathswatch.co.uk/vle/browse/236 HCF https://vle.mathswatch.co.uk/vle/browse/237 LCM https://vle.mathswatch.co.uk/vle/browse/238 Listing strategies https://vle.mathswatch.co.uk/vle/browse/226
3 4 5	Algebra 1	Introduction to algebra https://vle.mathswatch.co.uk/vle/browse/160 Collecting like terms https://vle.mathswatch.co.uk/vle/browse/188 Multiplication of terms https://vle.mathswatch.co.uk/vle/browse/189 Division of terms https://vle.mathswatch.co.uk/vle/browse/190 Expanding brackets https://vle.mathswatch.co.uk/vle/browse/251 Expanding and simplifying https://vle.mathswatch.co.uk/vle/browse/295 Factorisation https://vle.mathswatch.co.uk/vle/browse/252 Double brackets https://vle.mathswatch.co.uk/vle/browse/296
		HIGHER TIER MATERIAL ONLY
		Triple brackets https://vle.mathswatch.co.uk/vle/browse/345 Factorising hard quadratics https://vle.mathswatch.co.uk/vle/browse/360 Algebraic proof https://vle.mathswatch.co.uk/vle/browse/361
6 7	Geometry 1	Perimeter https://vle.mathswatch.co.uk/vle/browse/208 Area of a parallelogram https://vle.mathswatch.co.uk/vle/browse/211 Area of a triangle https://vle.mathswatch.co.uk/vle/browse/210 Area of a trapezium https://vle.mathswatch.co.uk/vle/browse/212 Circle properties 1 https://vle.mathswatch.co.uk/vle/browse/275 Circle properties 2 https://vle.mathswatch.co.uk/vle/browse/313 Circumference of a circle https://vle.mathswatch.co.uk/vle/browse/277 Area of a circle https://vle.mathswatch.co.uk/vle/browse/276 Sectors of circles https://vle.mathswatch.co.uk/vle/browse/334
8 9	Number 2	Place value https://vle.mathswatch.co.uk/vle/browse/153 Using place value https://vle.mathswatch.co.uk/vle/browse/250 Ordering decimals https://vle.mathswatch.co.uk/vle/browse/155 Mathematical notation https://vle.mathswatch.co.uk/vle/browse/157 Multiply decimals https://vle.mathswatch.co.uk/vle/browse/222 Dividing decimals https://vle.mathswatch.co.uk/vle/browse/223 Money questions 1 https://vle.mathswatch.co.uk/vle/browse/176 Money questions 2 https://vle.mathswatch.co.uk/vle/browse/177 Multiply/divide by powers of 10 https://vle.mathswatch.co.uk/vle/browse/185 Rounding to 10, 100 or 1000 https://vle.mathswatch.co.uk/vle/browse/186 Rounding to decimal places https://vle.mathswatch.co.uk/vle/browse/187 Rounding to significant figures https://vle.mathswatch.co.uk/vle/browse/248 Estimation https://vle.mathswatch.co.uk/vle/browse/249 Error intervals https://vle.mathswatch.co.uk/vle/browse/321
		HIGHER TIER MATERIAL ONLY
		Introduction to bounds https://vle.mathswatch.co.uk/vle/browse/293 Upper and lower bounds https://vle.mathswatch.co.uk/vle/browse/376

<p>10 11 12</p>	<p>Algebra 2</p>	<p>Function machines https://vle.mathswatch.co.uk/vle/browse/191 Equations with functions https://vle.mathswatch.co.uk/vle/browse/258 Re-arranging with functions https://vle.mathswatch.co.uk/vle/browse/259 Substitution https://vle.mathswatch.co.uk/vle/browse/253 Balancing equations https://vle.mathswatch.co.uk/vle/browse/297 Re-arranging with balancing https://vle.mathswatch.co.uk/vle/browse/299 Forming equations/formulae https://vle.mathswatch.co.uk/vle/browse/300 Inequalities on a number line https://vle.mathswatch.co.uk/vle/browse/301 Solve linear inequalities https://vle.mathswatch.co.uk/vle/browse/302</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Re-arranging difficult formulae https://vle.mathswatch.co.uk/vle/browse/358 Inverse functions 1 https://vle.mathswatch.co.uk/vle/browse/389 Inverse functions 2 https://vle.mathswatch.co.uk/vle/browse/390 Composite functions https://vle.mathswatch.co.uk/vle/browse/391</p>
<p>13 14</p>	<p>Geometry 2</p>	<p>Properties of solids https://vle.mathswatch.co.uk/vle/browse/198 Nets https://vle.mathswatch.co.uk/vle/browse/199 Plans & elevations https://vle.mathswatch.co.uk/vle/browse/207 Surface area of cuboids https://vle.mathswatch.co.uk/vle/browse/272 Surface area of other prisms https://vle.mathswatch.co.uk/vle/browse/273 Volume of a cuboid https://vle.mathswatch.co.uk/vle/browse/274 Volume of a prism https://vle.mathswatch.co.uk/vle/browse/278 Spheres https://vle.mathswatch.co.uk/vle/browse/336 Pyramids https://vle.mathswatch.co.uk/vle/browse/337 Cones https://vle.mathswatch.co.uk/vle/browse/338 Frustums https://vle.mathswatch.co.uk/vle/browse/339</p>

Week Number	Unit of Work	Year 10 Spring Term MathsWatch Resources
15 16 17	Number 3	<p>Introductions to powers https://vle.mathswatch.co.uk/vle/browse/184 Squares, cubes and roots https://vle.mathswatch.co.uk/vle/browse/239 Working with indices https://vle.mathswatch.co.uk/vle/browse/240 Index notation https://vle.mathswatch.co.uk/vle/browse/292 Standard Form https://vle.mathswatch.co.uk/vle/browse/241</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Negative indices https://vle.mathswatch.co.uk/vle/browse/320 Fractional indices https://vle.mathswatch.co.uk/vle/browse/356 Introduction to surds https://vle.mathswatch.co.uk/vle/browse/377 Expressions with surds https://vle.mathswatch.co.uk/vle/browse/378 Rationalising surds https://vle.mathswatch.co.uk/vle/browse/379</p>
18 19	Statistics 1	<p>Types of data https://vle.mathswatch.co.uk/vle/browse/219 Tally and bar charts https://vle.mathswatch.co.uk/vle/browse/169 Pictograms https://vle.mathswatch.co.uk/vle/browse/170 Averages and range https://vle.mathswatch.co.uk/vle/browse/218 Pie charts https://vle.mathswatch.co.uk/vle/browse/288 Scatter diagrams https://vle.mathswatch.co.uk/vle/browse/289 Frequency distributions https://vle.mathswatch.co.uk/vle/browse/290</p>
20 21	Algebra 3	<p>Co-ordinates https://vle.mathswatch.co.uk/vle/browse/161 Co-ordinate problems https://vle.mathswatch.co.uk/vle/browse/271 Straight-line graphs https://vle.mathswatch.co.uk/vle/browse/254 Simultaneous equations https://vle.mathswatch.co.uk/vle/browse/303</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Inequalities and regions https://vle.mathswatch.co.uk/vle/browse/368</p>
22 23	Geometry 3	<p>Names of angles https://vle.mathswatch.co.uk/vle/browse/167 Angles on lines and at a point https://vle.mathswatch.co.uk/vle/browse/200 Angles and parallel lines https://vle.mathswatch.co.uk/vle/browse/279 Angles in a triangle https://vle.mathswatch.co.uk/vle/browse/280 Properties of triangles https://vle.mathswatch.co.uk/vle/browse/281 Geometric definitions https://vle.mathswatch.co.uk/vle/browse/162 Polygons https://vle.mathswatch.co.uk/vle/browse/163 Angle sum of polygons https://vle.mathswatch.co.uk/vle/browse/282 Symmetries https://vle.mathswatch.co.uk/vle/browse/164 Tessellations https://vle.mathswatch.co.uk/vle/browse/165</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Circle theorems https://vle.mathswatch.co.uk/vle/browse/351 Proof of circle theorems https://vle.mathswatch.co.uk/vle/browse/352</p>
24 25	Number 4	<p>Equivalent fractions https://vle.mathswatch.co.uk/vle/browse/180 Simplifying fractions https://vle.mathswatch.co.uk/vle/browse/181 Comparing fractions https://vle.mathswatch.co.uk/vle/browse/227 Finding a fractional amount https://vle.mathswatch.co.uk/vle/browse/230 Adding/subtracting fractions https://vle.mathswatch.co.uk/vle/browse/228 Multiplying fractions https://vle.mathswatch.co.uk/vle/browse/231 Reciprocals https://vle.mathswatch.co.uk/vle/browse/234 Dividing fractions https://vle.mathswatch.co.uk/vle/browse/232 Decimals and fractions https://vle.mathswatch.co.uk/vle/browse/242</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Recurring decimals to fractions https://vle.mathswatch.co.uk/vle/browse/344 Recurring decimal proof https://vle.mathswatch.co.uk/vle/browse/357</p>

Week Number	Unit of Work	Year 10 Summer Term MathsWatch Resources
26 27	Probability	<p>The probability scale https://vle.mathswatch.co.uk/vle/browse/168</p> <p>Frequency trees https://vle.mathswatch.co.uk/vle/browse/213</p> <p>Listing outcomes https://vle.mathswatch.co.uk/vle/browse/214</p> <p>Two-way tables https://vle.mathswatch.co.uk/vle/browse/217</p> <p>Possibility spaces https://vle.mathswatch.co.uk/vle/browse/285</p> <p>Mutually exclusive events https://vle.mathswatch.co.uk/vle/browse/216</p> <p>Calculating probabilities https://vle.mathswatch.co.uk/vle/browse/215</p> <p>Experimental probabilities https://vle.mathswatch.co.uk/vle/browse/284</p>
29 30 31	Algebra 4	<p>Balancing equations https://vle.mathswatch.co.uk/vle/browse/297</p> <p>Factorising/solving quadratics https://vle.mathswatch.co.uk/vle/browse/323</p> <p>Simultaneous equations https://vle.mathswatch.co.uk/vle/browse/329</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Difference of two squares https://vle.mathswatch.co.uk/vle/browse/324</p> <p>Simplifying algebraic fractions https://vle.mathswatch.co.uk/vle/browse/384</p> <p>Quadratic formula https://vle.mathswatch.co.uk/vle/browse/359</p> <p>Completing the square 1 https://vle.mathswatch.co.uk/vle/browse/381</p> <p>Completing the square 2 https://vle.mathswatch.co.uk/vle/browse/382</p> <p>Quadratic equations https://vle.mathswatch.co.uk/vle/browse/385</p> <p>Tough simultaneous equations https://vle.mathswatch.co.uk/vle/browse/386</p>
32 33	Number 5	<p>Introduction to percentages https://vle.mathswatch.co.uk/vle/browse/195</p> <p>Fractions, dec % % https://vle.mathswatch.co.uk/vle/browse/243</p> <p>Percentage of an amount 1 https://vle.mathswatch.co.uk/vle/browse/244</p> <p>Percentage of an amount 2 https://vle.mathswatch.co.uk/vle/browse/245</p> <p>Change to a percentage 1 https://vle.mathswatch.co.uk/vle/browse/246</p> <p>Change to a percentage 2 https://vle.mathswatch.co.uk/vle/browse/247</p> <p>Percentage change 1 https://vle.mathswatch.co.uk/vle/browse/266</p> <p>Percentage change 2 https://vle.mathswatch.co.uk/vle/browse/267</p> <p>Reverse percentages https://vle.mathswatch.co.uk/vle/browse/268</p> <p>Simple interest https://vle.mathswatch.co.uk/vle/browse/269</p> <p>Compound interest https://vle.mathswatch.co.uk/vle/browse/331</p>
34 35 36	Statistics 2	<p>Frequency tables https://vle.mathswatch.co.uk/vle/browse/221</p> <p>Frequency polygons https://vle.mathswatch.co.uk/vle/browse/1205</p> <p>Mean from grouped data https://vle.mathswatch.co.uk/vle/browse/291</p> <p style="text-align: center;">HIGHER TIER MATERIAL ONLY</p> <p>Cumulative frequency https://vle.mathswatch.co.uk/vle/browse/354</p> <p>Box Plots https://vle.mathswatch.co.uk/vle/browse/355</p> <p>Histograms https://vle.mathswatch.co.uk/vle/browse/375</p>
37 38	TEST	The Year 10 test will take place at some stage during this term