## Y11 Revision

#### **MATHS - HIGHER**

Paper 1 (non-calculator) Paper 2 (calculator) Paper 3 (calculator)



Each paper is 1 hour 30 minutes long. It is recommended that you use your class notes, <a href="http://vle.mathswatch.com/contents/">http://vle.mathswatch.com/contents/</a> to help with your revision. Below are the clips that are relevant to the topics that are to be tested.

Your username is the same as the beginning of your email address: **16aaabbb@bishopchalloner** where **aaa** are the first 3 letters of your first name, and **bbb** are the first 3 letters of your surname. Password is **bishop.** When you log in, click on videos, and select the qualification as 'GCSE'.

Number, Ratio & Proportion	MathsWatch?	Corbett?	Revised?
Adding, subtracting, multiplying & dividing decimals	66-67	90 - 94	
Adding, subtracting, multiplying & dividing fractions	71-74	142, 139, 134, 133	
LCM, HCF, prime factor decomposition	78-80	218, 219, 224	
Percentages of amounts	86	235, 237	
Increase/decrease by a percentage	108	239	
Percentage change	88, 109	233	
Compound interest and depreciation	164	236, 239	
Combinations (product rule for counting)		383	
Ratio (sharing in a given ratio); expressing as a fraction	106	270, 271	
Proportion (including recipe questions)	39	255a, 256	
Direct and inverse proportion	199	254, 255	
Standard form, including conversions and calculations	83	300 - 303	
Compound measures (mass, density, volume)	142	384	
Error intervals	155	377	
Bounds including calculations	132, 206	184	
Estimation	91	215	
Indices including fractional and negative	154	175, 173	
Surds, including rationalising denominators	207a-c	307	
Adding, subtracting, multiplying & dividing decimals	66-67	90 - 94	
Adding, subtracting, multiplying & dividing fractions	71-74	142, 139, 134, 133	

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Algebra	MathsWatch?	Corbett?	Revised?
Algebraic manipulation and substitution	137	16, 115	
Expanding and simplifying, including quadratics and expanding triple brackets	134b	14, 15	
Solving linear equations	135a	111, 113	
Solving linear inequalities, and representing on a number line	138, 139	176, 177, 178, 179	
Solving quadratic inequalities	212	378	
Rearranging formulae	190	7, 8	
Factorising and solving quadratics	157	117, 266	
Solving simultaneous equations with a quadratic	211	295, 296, 298	
Solving simultaneous equations graphically	140	297	
Solving quadratic equations by completing the square	209a, 209b	371	
Simplifying algebraic fractions	210a	23, 24	
Expressing algebraic ratios as algebraic fractions, and solving	210b	269a, 271d	
Parallel and perpendicular lines	159b, 208, 97	189, 190, 194, 195, 196, 197	
Inequalities and quadratic inequalities	212	378	
Sequences, including quadratic nth term	213	388a, 388b, 388c	
Straight Line Graphs	96, 97, 99, 159a	186, 187	
Recognising graphs (cubic, reciprocal, trigonometric)	161, 195a	344, 346, 338, 339, 340	
Functions, including composite and inverse	214-215	369, 370	
Estimating areas under curves	216a	389	
Estimating gradients to curves	126b	390a, 390b	
Tangents to circles	208	372, 373a	
Transforming functions	196a,196b	323	
Algebraic proof	193	365	

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Handling Data and Geometry	MathsWatch?	Corbett?	Revised?
Calculating probabilities	59	248	
Probability tree diagrams, and algebraic probability problems	204	252	
Frequency Polygons	65b	155, 156	
Proportional sampling (stratified sampling)	152, 176	281	
Angles, including polygons	123	32	
Area & perimeter of rectangles and triangles	53-56	114, 45, 241, 49	
Area & circumference of a circle	117,118	59, 60	
Volume and surface area of prisms	114a/b, 119	356, 357, 315, 310	
Pythagoras' Theorem	150b	257	
Venn Diagrams and set notation	127a/b	370, 380	
Right angled trigonometry, including 3D trigonometry	168, 217-218	330 - 332	
Non-right angled trigonometry	201-203	333,334,335-337	
Bearings		26-27	
Exact trig values	173	341	
Areas and perimeters of sectors	167	46, 58, 63	
Vectors	219	353	
Cumulative Frequency, Box Plots and IQR	186	153, 154	
Calculating medians & quartiles from raw data	62	50	
Histograms	205	157, 158, 159	
Circle Theorems	183	64-65	
Transformations (rotation, reflection, translation, enlargement including negative scale factors)	48-50, 148, 181a/b	104 - 109	
Nets, plans & elevations	51	354	
Volume of spheres and cones	169, 171	359, 361	