

Learning Programme – Mathematics – 4th Year – Set 1

Topic/ Content	Objectives/Skills (topic grade in brackets)	Homework	Assessment	Success Criteria (GCSE grades)	Stretch & Challenge (Thirst for Learning)
	Trinity Term				
Sampling & secondary data	Understanding the handling data cycle and carrying out effective data collection (4). Identifying different types of data including qualitative, quantitative, discrete, continuous, primary and secondary data (4). Understanding different sampling methods and identifying possible bias (4). Calculating stratified samples.	Two to three teacher marked pieces of homework will be set each half-term.	End of Year Exam (close to May Half-Term), on all topics covered at Secondary school.	Mainly determined from End of Year Exam, however, Half-Term tests, class work & homework may also be used. GCSE Grade boundaries dependent on difficulty of test.	Students will be challenged using extension questions on the topics they are studying, designed to develop their ability to solve multi-staged problems.
Histograms	Drawing and interpreting histograms (8). Calculating frequency density (7).				
Linear and Quadratic Inequalities	Understanding and writing inequalities (4). Solving 'linear' inequalities (5). Representing and interpreting inequalities on graphs. Solve quadratic inequalities (8/9).				
Algebraic Proof	Use algebra to prove number statements (7/8) and disprove number statements using a counter example (4).				
Algebraic fractions	Add (8), subtract (8), multiply (6) and divide algebraic (8) fractions. Solve equations involving fractions with algebraic denominators (8/9).				
Changing the subject	Re-arranging equations where the new subject appears once (4/5).				
Changing the subject 2	Re-arranging equations where the new subject appears more than once (6).				
Indices	Understanding index notation. Multiplying, dividing and raising one power to another (5). Understanding and using negative indices (7). Being able to evaluate fractional indices (7).				
Sequences	Recognise and use rules for number and pattern sequences, including triangular, square, cube & Fibonacci-type numbers,				

	arithmetic sequences, quadratic sequences and geometric sequences (3/4) Finding the nth term for linear (4) and quadratic sequences (7).				
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