

Year Group: 12	Subject: Mathematical studies	Term: Autumn 2021
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Topic	Objectives	Assessments
The use of spreadsheets	<ul style="list-style-type: none"> • Use excel spreadsheets to solve simple problems and more complex problems, including writing their own spreadsheets with formula • Use excel to produce clear , well set out graphs, be able to change data sets, change graph types, label and change axis as needed. 	Students will complete tutorial work and assignments on each topic.
Algebra	<ul style="list-style-type: none"> • use the order of operations to consistently achieve the correct answer to maths problems • Substitute numbers in to algebraic expressions and equations • expand single brackets and double brackets • factorise single and double brackets • solve simple and complex equations , • rearrange equations 	There will be a summative assessment at the end of each topic.
Percentages	<ul style="list-style-type: none"> • Make comparisons of amounts using percentages • Calculate reverse percentage and solve problems using reverse percentages • Use repeated change to solve problems including compound interest and depreciation calculations • Calculate Annual Equivalent rates for various savings accounts , understand the difference between nominal rates and AER and make investment decisions based on AER 	Both the assignments and the topic end tests are based on past exam questions. After each assignment and topic end test there will be an opportunity for students to review their understanding.
Data	<ul style="list-style-type: none"> • Identify and describe discrete and continuous data and primary and secondary data, • produce good quality questionnaires, identify poor questions, understand the difference between a population and a sample. • Identify and describe different sampling methods 	Teachers will provide students with targeted feedback, based on their test performance.
Fermi estimation	<ul style="list-style-type: none"> • Gain an understanding of how modelling in maths is used to develop solutions to real life problems • Understand Fermi estimation, how it can be used and how it is presented in the context of the exam 	At the end of the term students will have a longer summative assessment based on past exam questions.