
BLANCHELANDE
COLLEGE
Sixth Form Bridging Courses
Mathematical Studies

Blanchelande College

A-Level Bridging Work
Mathematical Studies/Core Mathematics
For Summer 2020

Introduction

This course is aimed at students who have achieved a Grade 5 or above in GCSE Mathematics and are not studying AS / A level Mathematics. It is particularly useful for students who are studying Biology, Physical Education, Psychology, Business Studies and Geography.

The course is assessed by two written examinations, each of 1½ hour duration. Paper 1 covers data collection (including different methods of sampling), data processing and representation, together with financial calculations such as student loans, income tax and national insurance. Paper 2 covers critical analysis, probability, expectation, cost benefit and risk analysis.

The following link takes you to some suggested reading and listening around the subject as well as some activities you may wish to try: Maths Bridging work Blanchelande College.docx

Year 11 into Year 12 specific bridging work

To be completed June – September

1. By means of two fully-worked examples, explain and illustrate the difference between simple interest and compound interest. You should quote any relevant formulas and explain the meanings of the variables in your formulas.

2. Key mathematical skills used regularly in the Mathematical Studies course are percentages, mean, estimation, upper and lower bounds probability, cumulative frequency and histograms. Use www.corbettmaths.com and www.mymaths.co.uk **to** go over any of these subject areas that you are unsure of.

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Extension Tasks to stretch your knowledge

- Stretch! · UKMT Questions – individual and group https://www.ukmt.org.uk/competitions
- N rich – problem solving tasks https://nrich.maths.org/secondary
- Dr Frost https://www.drfrostmaths.com/resourceexplorer.php
- During your course you will be shown how to calculate Pearson's Product Moment Correlation Coefficient (PMCC), by using both a very complicated formula and by using the built – in statistical functions of a calculator. You will then be shown how to interpret the value of PMCC in context. This video explains the basic principles really well https://www.youtube.com/watch?v=ugd4k3dC_8Y
- Another measure of correlation is Spearman's rank correlation coefficient. Research this second measure and produce a PowerPoint presentation explaining how to calculate the value of it. Your audience will be fellow students in the Sixth Form. The following sources may be useful: http://www.statstutor.ac.uk/resources/uploaded/spearmans.pdf