

Preparation for Sixth Form Studies- Core Mathematics (Mathematical Studies)

I'm really pleased you have chosen to study Core Mathematics with us this September and I hope the enclosed resources will help you to feel more prepared for the course when school resumes. There is also a short set of Core Mathematics introductory tasks for you to complete and hand in by Friday 4th September.

We will be putting activities on Dr Frost Maths and Mathswatch for you as well, these will be uploaded in one go but topics will have staggered deadlines to enable you to pace your work. We will issue you with log ons and passwords via email.

The key areas you should be looking at are as follows:

- Percentages- converting to decimals, calculate and compare percentages, percentage change, VAT and interest calculations.
- Graphs- sketching and plotting, equations of a straight line graph, interpreting graphs
- Data- collecting data, types of data, calculating averages and range, representing data in charts, interpreting your results.
- Probability- notation, displaying probability in diagrams, calculating probabilities.
- Key number skills and calculator skills
- Pythagoras- including 3d if you are feeling brave.
- Algebra- general skills including setting up and solving linear equations.
- Shape- area and perimeter of 2d shapes (including compound shapes), volume and surface area of prisms (extend to pyramids, spheres, compound shapes if brave)
- Spreadsheet skills- can you sum cells and calculate with a spreadsheet?

Resources are divided into two parts-

1. Review of core maths skills from GCSE- these are mainly number worksheets with answers that you can use a GCSE foundation textbook/ workbook or online websites to look up methods you may need a bit of help with!
2. More challenging and stretch activities that will help exercise your brain even more- but do not worry if you struggle with these, make sure you are happy with the core skills first.

Best Wishes

Dr Carr

Head of Mathematics