



Hampton Court House

Curriculum Outline 2020/21 – Year 13 Mathematics (SJ & MAM)

Autumn 2020

Principal Text: *OCR Mathematics A for Year 2*

We will continue to study pure mathematics, reviewing the work done at the end of Year 12 and looking further at transforming and sketching graphs, trigonometry and trigonometric identities and further differentiation.

Students will study the coordinate geometry of parametric equations and how to differentiate these.

5 hours of homework per week is essential for success at this course.

Links with fundamental values
The study of mathematics enables students to think logically and analytically. They should as a result of following the course gain an understanding of the value of data and facts in the decision making process.

Social, moral, spiritual and cultural content
Students will look at data on a range of topical issues such as climate, road accidents, health statistics and government spending. They will have a lot of exposure to real data and will be encouraged to think about and discuss their thoughts on these.

Spring 2021

Principal Text: *OCR Mathematics A for Year 2*

Students will focus a lot on calculus this term, developing their knowledge of the integration of more complex functions and also some basic differential equations.

Alongside this, students will also study the methods for analysing and representing large data-sets in the statistics module. They will study discrete data analysis and also the continuous normal distribution, as well as basic probability and linear regression.

In mechanics students will continue their study of kinematics and Newtons' laws, extending their understanding to motion in 2- and 3-dimensions. They will also look at projectiles and a mathematical description of friction.

Teamwork and respect is encouraged as a routine during class.

Opportunities to independently extend learning
You tube - Hegarty Maths
Physicsandmathstutor.com
Exam solutions website

Summer 2021

Principal Text: *OCR Examinations and past papers*

This term will be spent going through exam practice using the past papers from the OCR website.