Bishop Heber High School

Subject	Year	Term
Maths	13	1

Topic

Algebra & Functions, Sequences & Series, Parametric Equations, Binomial Expansion, Differentiation, Statistical Distributions, Hypothesis Testing, Regression & Correlation, Conditional Probability, Moments

Content (Intent)

Prior Learning (Topic) A Level year 1

- Algebraic manipulation
- Exponential Functions & Laws of Logarithms
- Types of numerical sequences
- Trigonometric identities
- Basic Binomial Expansion
- Basic differentiation
- Basic Probability
- Resolving Forces

Future Learning (Topic)

What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)
• Use proof by deduction & proof by contradiction • Simplify algebraic fractions & use partial fractions • Know function terminology including range & domain, work with the modulus function, composite & inverse functions • Understand the effect of combined transformations • Work with arithmetic & geometric sequences & series. • Carry out hypothesis tests involving the binomial distribution • Calculate the moment of a force about a point	Half-termly class tests Pre-Mock Exam Regular exam starter questions in class Ongoing self-assessment
• Convert between Cartesian & Parametric forms. • Use the general Binomial Theorem for expansions & approximations • Differentiation of trigonometric functions, exponentials and logarithms, (and their products or quotients), implicit and parametric equations. • Solve rates of change problems • Work with regression lines, understand and interpret correlation coefficients. • Solve conditional probability problems & use set notation. • Solve equilibrium problems involving moments.	Half-termly class tests Regular exam starter questions in class Ongoing self-assessment

How can parents help at home?

Encourage/monitor use of Uplearn

Helpful further reading/discussion (including Reading and Vocabulary Lists)

Class textbook: chapters 17, 19 – 25 (Pure) 13, 14, 26, 27 (Statistics) 31 (Mechanics)
Additional textbooks:
ISBN 978-1-292-18340-4 (Pure Y2) chapters
ISBN 978-1-292-23253-9 (Stats & Mech Y1) chapters 6, 7
ISBN 978-1-446-94407-3 (Stats & Mech Y2) chapters 1, 2, 4
Website: https://qualifications.pearson.com

Vocabulary Lists

Partial	Range	Geometric
Composite	Domain	Series
Arithmetic	Hypothesis	Convergent
Contradiction	Equilibrium	Recurrence
Modulus	Regression	Implicit