

# Year 13 A-Level Mathematics

GUNNERSBURY CATHOLIC SCHOOL



## (Statistics)

### Regression, Correlation and Hypothesis Testing

- ✓ Exponential models
- ✓ Measuring correlation
- ✓ Hypothesis testing for zero correlation

### Conditional Probability

- ✓ Set notation
- ✓ Conditional probability
- ✓ Conditional probabilities in Venn diagrams
- ✓ Probability formulae
- ✓ Tree diagrams

### The Normal Distribution

- ✓ The normal distribution
- ✓ Finding probabilities for normal distributions
- ✓ The inverse normal distribution function
- ✓ The standard normal distribution
- ✓ Finding  $\mu$  and  $\sigma$
- ✓ Approximating a binomial distribution
- ✓ Hypothesis testing with the normal distribution

Final A-Level Examinations

## (Mechanics)

### Moments

- ✓ Moments
- ✓ Resultant moments
- ✓ Equilibrium
- ✓ Centres of mass
- ✓ Tilting

### Forces and Friction

- ✓ Resolving forces
- ✓ Inclined planes
- ✓ Friction

### Projectiles

- ✓ Horizontal projection
- ✓ Horizontal and vertical components
- ✓ Projection at any angle
- ✓ Projectile motion formulae

### Applications of Forces

- ✓ Static particles
- ✓ Modelling with statics
- ✓ Friction and static particles
- ✓ Static rigid bodies
- ✓ Dynamics and inclined planes
- ✓ Connected particles

### Further Kinematics

- ✓ Vectors in kinematics
- ✓ Vector methods with projectiles
- ✓ Variable acceleration in one dimension
- ✓ Differentiating vectors
- ✓ Integrating vectors

Final A-Level Examinations

