

Autumn 1: September – October

What are we learning:

Forces at an Angle

M2a Resolving forces

M2b Friction forces

Moments

M1 Forces' turning effects

Application of Forces

M4a Equilibrium and statics (including ladder problems)

M4b Dynamics of a particle in 2D

Assessments:

- Forces and moments assessment on M2a, M2b and M1

Support:

- Integral Maths
- ActiveLearn
- Showbie resources
- Year 13 drop in – Monday afterschool in A13

Autumn 2: October – December

What are we learning:

Further Kinematics

M5a Constant acceleration

M5b Variable acceleration in 2D

Applications of Kinematics

M3 Projectiles

Vectors

12 Vectors in 3D

Differentiation

8a. Differentiating $\sin x$ and $\cos x$ from first principles

8b. Differentiating exponentials and logarithms

Assessments:

- Application of forces assessment on topics M4a and M4b
- Further kinematics and Projectiles assessment on topics M5a, M5b and M3

Support:

- Integral Maths
- ActiveLearn
- Showbie resources
- Year 13 drop in – Monday afterschool in A13

Spring 1: January – February

What are we learning:

Differentiation

8c. Products, quotients and implicit functions.

8d. Second derivatives.

8e. Rates of change problems.

Integration

10a. Integrating $1/x$, exponentials and trig.

10b. Using the reverse of differentiation, and using trigonometric identities to manipulate integrals.

Assessments:

- Pure and Applied Mock Exams

Support:

- Integral Maths
- ActiveLearn
- Showbie resources
- Year 13 drop in –
Monday afterschool in
A13

Spring 2: February – April

What are we learning:

11a. Integration by substitution.

11b. Integration by parts.

11c. Use of partial fractions.

11d. Area between graphs and understanding the area is the limit of a sum (Using sigma notation).

11e. The trapezium rule.

11f. Differential Equations.

Assessments:

- No assessment. There is a possibility of a second mock – If this happens, it will be communicated to students in good time.

Support:

- Integral Maths
- ActiveLearn
- Showbie resources
- Year 13 drop in – Monday afterschool in A13

Summer 1 : April – May

What are we learning:
Preparing for A-level exams

Assessments:

- External A-level Exams

Support:

- Integral Maths
- ActiveLearn
- Showbie resources
- Year 13 drop in –
Monday afterschool in
A13