

Gordon's School Mathematics Department



A-Level Further- Curriculum Map



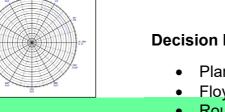
Further Mechanics

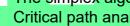
- Momentum as a vector Elastic strings and springs
- Elastic collisions in two dimensions

Complex numbers

Decision Maths

- Planarity algorithm
- Floyd's algorithm
- Route inspection
- The travelling salesman problem
- The simplex algorithm
- Critical path analysis





Argand diagrams:



Core Pure Maths

Series

Year 13

Methods in calculus

Volumes of revolution

Polar coordinates

• Hyperbolic functions

Differential equations

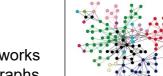
Further Mechanics

- Momentum and impulse
- Work, energy and power
- Elastic collisions in one dimension

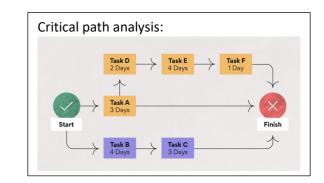


- Algorithms
- Graphs and networks
- Algorithms on graphs
- Route inspection
- Linear programming
- Critical path analysis

Decision Maths



Algorithms on graphs:



Key Words / Skills:

based on what has gone before.

are not given in rounded form.

truth of a statement.

Prove - Provide a formal mathematical argument to demonstrate validity.

showing the main features of a curve.

needs to be given for any results found.

Show that - Show a result is true. Because you are given the result, your explanation has to be

sufficiently detailed to cover every step of your

Hence - An indication that the next step should be

Exact - An exact answer is one where numbers

Verify - Substitute given values to demonstrate the

Sketch - Draw a diagram, not necessarily to scale,

Determine - Justification should be given for any results found, including working where appropriate.

Find, Solve, Calculate - While working may be necessary to answer the question, no justification

Command words

working.

Core Pure Maths

- Complex numbers
- Argand diagrams
- Series
- Roots of polynomials
- Volumes of revolution
- Matrices
- Linear transformations
- Proof by induction
- Vectors

