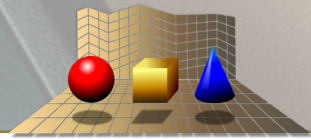


# Year 12

# Further Maths - A Level



## Mechanics

- Work
- Energy and power
- Impulse and momentum
  - Circular motion
- Dimensional analysis

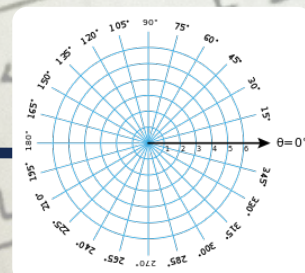


## Statistics

- Bivariate data and correlation coefficients
- Discrete random variables
  - Poisson distribution



**Meta-cognition** – the ability to knowingly use a wide range of thinking approaches and to transfer knowledge from one circumstance to another.



## ANALYSING

**Complex and multi-step problem solving**  
The ability to break down a task, decide on a suitable approach, and then act



## Pure

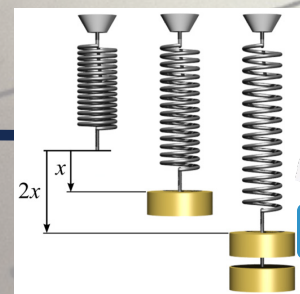
- Matrices
- Complex numbers
- Roots
- Conics
- Polar coordinates
- Vectors

# Year 13



## Statistics

- Chi-squared testing
- Continuous random variables
- Confidence intervals using Normal and t-distributions



Connection finding

## Pure

- Series and induction
- Hyperbolic Functions
- Numerical methods
- First and second order differential equations
- DeMoivre's Theorem



## REALISING

**Automaticity** – the ability to use some skills with such ease as they no longer require active thinking.

## Mechanics

- Hooke's Law
- Moments of Forces
  - Centre of mass
- Extended circular motion

## A Level assessment

At the end of Year 13, students will sit 3 exam papers.  
Each 2 hours long and worth 100 marks.  
Paper 1 and 2: Pure, Paper 3: Mechanics and Statistics