

# Sevenoaks School Pre-IB Maths Course

## Day 1

### **Morning: Algebraic Methods I**

Simplifying surds  
Factorisation and the factor theorem  
Completing the square  
Algebraic fractions  
Simultaneous equations  
Dealing with inequalities

### **Afternoon: Geometry I**

Linear graphs  
The equation of a circle  
Right angled triangles  
The sine and cosine rules  
Three dimensional problems

## Day 2

### **Morning: Algebraic Methods II**

Permutations and combinations  
Binomial expansion  
Binomial probability  
Logarithms

### **Afternoon: Geometry II**

Exponential and logarithmic graphs  
Exponential growth and decay  
General solution of trigonometric equations  
Trigonometric identities

## Day 3

### **Morning: Calculus**

Differentiating polynomials  
Applications of differentiation  
Integrating polynomials  
Applications of integration

### **Afternoon: Numerical Methods**

Recurrence relationships  
Iterations and equations  
The trapezium rule