

**YR11**



## Probability

Can I apply ideas of randomness, fairness and equally likely events to calculate expected outcomes or multiple future experiments?  
Can I relate relative expected frequencies to theoretical probability, using appropriate language and the 0 to 1 probability scale?  
Can I enumerate sets and combinations of sets systematically using tables, grids, Venn diagrams and tree diagrams?

**Y11 AUTUMN 1**



## Volume

Can you compare lengths, areas and volumes using ratio notation?  
Do you know how to apply formulae to calculate volume of: spheres, pyramids, cones and composite solids?  
Can you work out exact values with multiples of  $\pi$ ?

**Y11 AUTUMN 2**



## Quadratics, rearranging formulae and identities

Can I factorise quadratic expressions of the form  $x^2 + bx + c$ ?  
How do I simplify expressions involving sums, products and powers, including the laws of indices?

**Y11 AUTUMN 3**



## Scatter Graphs

Can I draw estimated lines of best fit?  
Can I interpolate and extrapolate apparent trends whilst knowing the dangers of doing so?

**Y11 AUTUMN 4**



## Pythagoras Theorem

Do I know the formula for Pythagoras' Theorem?  
How do I apply it to find lengths in right angled triangles?

**Y11 AUTUMN 6**



## Inequalities

What is an inequality?  
How do I solve linear inequalities in one variable?  
How do I represent the solution set on a number line?

**Y11 AUTUMN 5**



## Simultaneous Equations

What are simultaneous equations?  
How do I solve two simultaneous equations algebraically?  
How do I solve two simultaneous equations using graphs?

**Y11 AUTUMN 7**



## Algebra

How do I solve linear equations?  
How do I set up an equation from a written context?

**Y11 AUTUMN 8**

**Y11 SPRING 1**

## Graphs

How do I use a graph to estimate the solution to an equation?

**Y11 SPRING 2**



## Sketching Graphs

How do I recognise, sketch and interpret graphs of linear functions, quadratic functions?

**Y11 SPRING 3**



## Direct and Inverse proportion

What is the difference between direct proportion and inverse proportion?  
How do I direct proportion problems?  
How do I solve written inverse proportion problems?  
How do I solve proportion problems shown in a table?  
How do I solve proportion problems represented on a graph?

**Y11 SPRING 5**



## Solving Quadratic Equations

How do I know an equation is quadratic?  
How do I solve quadratic equations algebraically by factorising?  
How do I find approximate solutions using a graph?



## Trigonometry

What are the three trigonometric ratios?  
How do I find the size of an angle in a right-angled triangle using trigonometry?  
How do I find the length of a side in a right-angled triangle using trigonometry?

**Y11 SPRING 4**



## Quadratic Graphs

How do I recognise, sketch and interpret graphs of quadratic functions?

**Y11 SPRING 6**



**Y11 SUMMER 1**



## Growth and Decay

How do I set up, solve and interpret the answers in growth and decay problems, including compound interest?

**Y11 SUMMER 2**



## Vectors

How do I represent a column vector with a diagram?  
How do I add and subtract column vectors.  
How do I multiply vectors by a scalar quantity.

**KS5**