Headlands School

Subject Information

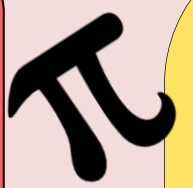
Year 11 MATHEMATICS

Overview:

In year 11 the first term is spent completing the program of study at either a foundation or a higher level.

Then the main focus is on reviewing topics and learning examination techniques.

There are ample opportunities to extend and deepen previous knowledge on all areas of the syllabus,



Term 1:

[F— Foundation only H— Higher only F/H— Foundation & Higher]

Multiplicative reasoning (F): percentages; growth and decay; compound measures; direct and inverse proportion.

Constructions, loci & bearings (F): 3D solids; plans and elevations; accurate drawings, scale drawings and maps; constructions; loci and regions; and bearings.

Circle theorems (H): radii and chords; tangents; angles in circles; and applying circle theorems.

Equations & graphs (F/H): expanding double brackets; plotting and using quadratic graphs; factorising quadratic expressions; solving quadratic equations algebraically; solving simultaneous equations graphically; representing inequalities graphically; cubic equations; and using iteration to solve equations.

Perimeter, area & volume (F): circumference and area of a circle; semicircles and sectors; composite 2D shapes and cylinders; pyramids and cones; spheres and composite solids.

Fractions, indices & standard form (F): multiplying and dividing fractions; the laws of indices; writing large and small numbers in standard form; and calculating with standard form.

Vectors & geometric proof (H): vectors and vector notation; vector arithmetic; parallel vectors and collinear points; solving geometric problems.

Congruence, similarity & vectors (F): similarity and enlargement; and vectors.

Proportion & graphs (H): direct proportion; inverse proportion; exponential functions; non-linear graphs; translating and reflecting graphs of functions.

Term 2:

Algebra (F/H): graphs of cubic and reciprocal functions; non-linear graphs; rearranging formulae; proof.

The remainder of this term concentrates on exam techniques and personal revision.

You will have been provided with a full breakdown of your strengths and weaknesses from the mock exam in the previous term. Lessons will be tailored to meet your needs.

You will have the opportunity to work through practice exam papers both individually and with other students.

Term 3:

This last term continues to concentrate on exam techniques and personal revision. Lessons will be tailored to meet your needs.