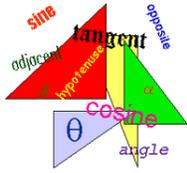


Fourth and Fifth Forms Mathematics Syllabus



Term I

Computation: See CXC syllabus for details.

Statistics and Probability: See CXC syllabus for details.

Algebra I: Directed numbers, substitution; simplifying algebraic terms; indices; factorization; operations; algebraic fractions; and direct and inverse variations.

Algebra II: Changing the subject of the formula; equations, inequalities, simultaneous equations & word problems; solving quadratic equations; and set builder notation for expressing the solution set of equations.

Relations, Functions & Graphs: See CXC syllabus for details. (Non-CXC students cover only compulsory topics.)

Geometry I: Geometrical transformations — translation, reflection and rotation (congruence), and enlargement (similarity). Combination of transformations (including glide reflections). Pythagoras' Theorem and distance formula.

Term II

Trigonometry I: Definitions of sine, cosine and tangent for right-angled triangles, and their use in calculations; the angle of elevation and depression, altitude and bearings. Solve word problems.

Trigonometry II (CXC students): Sine and cosine formulae — simple practical applications (including three-dimensional shapes). Trigonometrical formulae for the area of a triangle

Matrices: See CXC syllabus for details. (Non-CXC students cover only compulsory topics.)

Vectors: See CXC syllabus for details. (Non-CXC students cover only compulsory topics.)

Geometry II: Constructing angles (30° , 45° , 60° , 75° , 90° , 105° , 120° , 135° , 150°), triangles and quadrilaterals; constructing the perpendicular bisector of a line; constructing a line perpendicular to another line from a point; and constructing parallel lines. Constructing inscribed circles (triangles only).

Measurement: See CXC syllabus for details.

Linear Programming: Use linear programming techniques to solve problems involving two variables.

Circle Geometry: Solve problems using theorems related to the properties of a circle.

Term III

Number Theory (revision): See CXC syllabus for details

Consumer Arithmetic (revision): See CXC syllabus for details.

Set Theory (revision): See CXC syllabus for details.

Revision: Past examination papers.

N.B. Order of topics may vary according to if the student is in fourth or fifth form and if the student is in the accelerated fourth form Mathematics class.
