

DIT Maths Competency Test

Syllabus MCT

1. **Statistics and probability:** counting, binomial coefficients, Venn diagrams, probability problems, outcomes of random processes, normal distribution problems and correlation coefficient.
2. **Geometry and trigonometry:** solve problems involving a line and a circle, perpendicular distance from a point to a line, use trigonometry to solve problems in 3D, solve trigonometric equations and graph trigonometric functions.
3. **Number systems:** arithmetic and geometric series, solve problems involving logarithms, solve problems involving indices and complex numbers.
4. **Algebra:** Manipulation of equations, binomial theorem, arithmetic operations on polynomials, solving equations, solving inequalities and systems of simultaneous equations.
5. **Functions:** Graphs and continuity, Differentiation of functions, finding rates of change and maximum and minimum points using differentiation, Integration of standard functions and determine areas using integration.

NOTE: Several changes have been made to the MCT syllabus to align it with the new Project Maths Strands.

The new syllabus will be in effect from the beginning of 2017.