VCE UNITS INFORMATION

VCE Mathematics – Mathematical Methods Units 1 and 2

CONTENT

Mathematical Methods Unit 1 provides an introductory study of simple elementary functions of a single real variable, algebra, calculus, probability and statistics and their applications in a variety of practical and theoretical contexts. In Unit 2, students focus on the study of simple transcendental functions and the calculus of simple algebraic functions. The two units are designed as preparation for Mathematical Methods Units 3 and 4 and contain assumed knowledge and skills for these units.

In undertaking this unit, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs and differentiation with and without the use of technology. They will have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is incorporated throughout the study.

OUTCOMES

For each unit, the student is required to demonstrate achievement of three outcomes. As a set these outcomes encompass all of the selected areas of study for each unit. For each of Unit 1 and Unit 2 the outcomes as a set apply to the content from the areas of study and topics selected for that unit.

- Students should be able to define and explain key concepts in relation to the topics from the selected areas of study, and apply a range of related mathematical routines and procedures
- Students should be able to apply mathematical processes in non-routine contexts, including situations requiring problem-solving, modelling or investigative techniques or approaches, and analyse and discuss these applications of mathematics
- Students should be able to select and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches

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