



Course Information

Mathematics

Mathematics Methods | MAM

ATAR

A2MAM

Unit 2 Exponentials; arithmetic and geometric sequences

In this unit you will study exponentials. Their graphs are examined and their applications in a wide range of settings are explored. Arithmetic and geometric sequences are introduced and their applications are studied. Rates and average rates of change are introduced, and this is followed by the key concept of the derivative as an instantaneous rate of change. These concepts are reinforced numerically, by calculating difference quotients both geometrically as slopes of chords and tangents, and algebraically. Calculus is developed to study the derivatives of polynomial functions, with simple application of the derivative to curve sketching, the calculation of slopes and equations of tangents, the determination of instantaneous velocities and the solution of optimisation problems. The unit concludes with a brief consideration of anti-differentiation.



Prerequisites

Must have at least a **C grade** in **Year 10 number and algebra**.

Must be in **OLNA category 3**



Type of Assessment

40% Response
20% Investigation
40% Examination



Year of Study

Year 11



Costs

Unit Cost \$30