

## DRAFT PERFORMANCE BANDS

### MATHEMATICS EXTENSION 2

*The typical performance in this band:*

<b>Band E4</b>	<ul style="list-style-type: none"><li>• Exhibits mastery of most aspects of the Mathematics, Mathematics Extension 1 and Mathematics Extension 2 courses</li><li>• Synthesises mathematical techniques, results, and ideas creatively across the Mathematics, Mathematics Extension 1 and Mathematics Extension 2 courses to solve problems</li><li>• Combines excellent algebraic and modelling skills, multi-step logic and mathematical insight to solve difficult problems</li><li>• Constructs proofs in an abstract setting</li><li>• Communicates sophisticated mathematical ideas and relationships using the algebraic, diagrammatic and graphical techniques of mathematics, concise notation and clear logical argument</li></ul>
<b>Band E3</b>	<ul style="list-style-type: none"><li>• Exhibits facility with the techniques of the Mathematics, Mathematics Extension 1 and Mathematics Extension 2 courses</li><li>• Solves problems from the Mathematics Extension 2 topic areas, such as complex numbers, volumes, polynomials, conics and mechanics</li><li>• Successfully graphs a wide variety of functions showing critical points, asymptotes and points of inflexion without necessarily using calculus</li><li>• Demonstrates a sound grasp of both algebraic and geometric techniques required to solve problems</li><li>• Communicates mathematical ideas and relationships using the algebraic, diagrammatic and graphical techniques of mathematics, appropriate notation and logical argument</li></ul>
<b>Band E2</b>	<ul style="list-style-type: none"><li>• Exhibits knowledge of the techniques of the Mathematics, Mathematics Extension 1 and Mathematics Extension 2 courses</li><li>• Solves standard problems from the Mathematics Extension 2 topic areas such as integration and complex numbers</li><li>• Graphs a wide variety of functions showing many features without necessarily using calculus</li><li>• Applies calculus and other appropriate ideas to model practical problems</li><li>• Communicates effectively using mathematical language, notation, diagrams and graphs</li></ul>
<b>Band E1</b>	