

**Higher School Certificate**  
**Draft Performance Bands**

**Mathematics**  
**Extension 1**

The draft performance bands shown on the following page represent student performance in bands of achievement. They illustrate the typical performance of students in the Mathematics Extension 1 HSC course.

Each band contains descriptions of student achievement of the course outcomes. The bands will continue to be refined to include information from performance in the new HSC courses and the outcomes assessed internally.

## DRAFT PERFORMANCE BANDS

### MATHEMATICS EXTENSION 1

*The typical performance in this band:*

<b>Band E4</b>	<ul style="list-style-type: none"><li>• Exhibits extensive knowledge and skills appropriate to the Mathematics and Mathematics Extension 1 courses</li><li>• Synthesises mathematical techniques, results and ideas creatively across the Mathematics and Mathematics Extension 1 courses to solve difficult problems</li><li>• Uses sophisticated multi-step mathematical reasoning</li><li>• Interprets, explains, justifies and evaluates solutions to problems</li><li>• Translates efficiently between practical problems and their mathematical model</li><li>• Communicates complex ideas and arguments effectively using appropriate mathematical language, notation, diagrams and graphs</li></ul>
<b>Band E3</b>	<ul style="list-style-type: none"><li>• Exhibits knowledge and skills appropriate to the Mathematics and Mathematics Extension 1 courses</li><li>• Synthesises mathematical techniques, results and ideas from across the Mathematics and Mathematics Extension 1 courses to solve problems in areas such as geometry, calculus and probability</li><li>• Uses multi-step mathematical reasoning such as mathematical induction</li><li>• Translates between practical problems and their mathematical model in areas such as projectile motion</li><li>• Communicates effectively using appropriate mathematical language, notation, diagrams and graphs</li></ul>
<b>Band E2</b>	<ul style="list-style-type: none"><li>• Exhibits knowledge of the techniques of the Mathematics and Mathematics Extension 1 courses</li><li>• Uses techniques of integration from the Mathematics Extension 1 course such as integration by substitution</li><li>• Uses logical reasoning in numerical contexts such as problems in algebra and geometry</li><li>• Applies calculus to solve practical problems</li><li>• Communicates using mathematical language, notation, diagrams and graphs</li></ul>
<b>Band E1</b>	