Government of **Western Australia**
School Curriculum and Standards Authority

Summary report of the 2017 ATAR course examination:
Mathematics Methods

Year	Number who sat	Number of absentees
2016	4540	48
2017	4328	42

Examination score distribution – Written

Summary

Attempted by 4328 candidates   Mean 69.37%   Max 98.67%   Min 3.33%
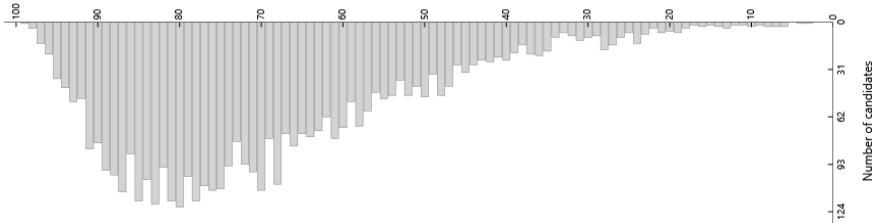
The examination consisted of two sections: a Calculator-free section and a Calculator-assumed section. Candidates performed to a similar standard in both the Calculator-free and Calculator-assumed sections.

Section means were:

Section One: Calculator-free
Attempted by 4328 candidates   Mean 24.45(/35)   Max 35.00   Min 0.00
Mean 69.86%

Section Two: Calculator-assumed
Attempted by 4328 candidates   Mean 44.92(/65)   Max 64.34   Min 1.31
Mean 69.11%

General comments

The examination was well attempted. The relatively few questions left unattempted indicated the examination's accessibility to most candidates. Although candidates generally performed calculations well, many had difficulty explaining how results were determined. There was also a lack of precision in drawing graphs for probability distributions and curve sketching.

Advice for candidates

- When asked to show or demonstrate a result, ensure that all steps and explanations are given.
- Identify the conditions that are needed for a particular probability distribution to be appropriate.
- Give clear explanations and take note of the number of marks when determining the detail required when answering the question.
- Remember that questions worth more than two marks require justification for full marks to be awarded.

Advice for teachers

- Students answered well when they were asked to perform calculations relating to sample proportions and probability distributions but generally struggled to interpret the results, indicating that they need more practice.
- Standard questions involving calculus, logarithms and the exponential function were well attempted.

- Students did not perform well when they needed to use the Fundamental Theorem of Calculus.

Comments on specific sections and questions
Section One: Calculator-free (52 Marks)
In Section One, candidates demonstrated a sound understanding of the log laws and standard calculus questions. They handled the probability questions well. However, candidates struggled with demonstration and explanation in questions relating to margin of error, the Fundamental Theorem of Calculus and area under the curve.

Section Two: Calculator-assumed (99 Marks)
In Section Two, candidates performed well in questions relating to probability distributions provided they recognised the appropriate distribution. They evaluated and calculated results correctly but struggled with the interpretation and explanation of some concepts. Once again, the application of calculus to rectilinear motion was handled well.