

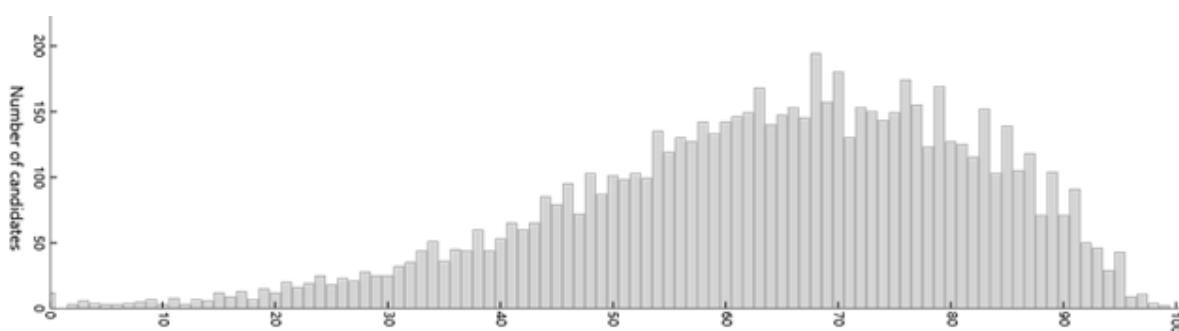


Summary report of the 2023 ATAR course examination report: Mathematics Applications

Year	Number who sat	Number of absentees
2023	7286	147
2022	7124	209
2021	7581	190
2020	7611	192

The number of candidates sitting and the number attempting each section of the examination can differ as a result of non-attempts across sections of the examination.

Examination score distribution



Summary

The examination consisted of two sections: a Calculator-free section and a Calculator-assumed section.

Attempted by 7286 candidates Mean 63.74% Max 98.66% Min 0.00%

Section means were:

Section One: Calculator-free	Mean 67.45%		
Attempted by 7274 candidates	Mean 23.61(/35)	Max 35.00	Min 0.00
Section Two: Calculator-assumed	Mean 61.75%		
Attempted by 7266 candidates	Mean 40.14(/65)	Max 65.00	Min 0.00

General comments

The paper was fair and accessible to all candidates, with questions taken from across the syllabus. The length of the paper seemed appropriate, with most candidates attempting all questions. There was a good mixture of straight-forward and discriminating questions. Question 5 (Hungarian algorithm) appeared to be the easiest on the paper with a mean of 82.04% while Question 14 (annuities and perpetuities) appeared to be the most difficult with a mean of 41.05%. Basic arithmetic skills were a concern for many candidates.

Advice for candidates

- Ensure you show arrows on directed networks, including on any dummy links.
- Read questions carefully and look for the most efficient way of determining the solution, particularly when answering calculator-free questions.
- Ensure your handwriting is legible.
- Ensure you use the given variables when stating the equation of the least-squares line.

Advice for teachers

- Ensure students understand the meaning of the phrase 'in the context of this question'.
- Emphasise to students that the square root of a number cannot be negative.
- Encourage students to check their arithmetic.
- Encourage students to provide working out, even when questions are worth two marks.
- Stress to students that when using a regression line or a line of best fit to make predictions for values outside the data range, they are unreliable.

Comments on specific sections and questions

Section One: Calculator-free (52 Marks)

Most candidates performed well in this section, as shown by a mean of 67.45%. However, basic arithmetic and algebraic skills were lacking among many candidates, as was evident in Question 1 and Question 3 part (c).

Section Two: Calculator-assumed (97 Marks)

Candidates generally performed well in this section, particularly on Questions 7, 11 and 12. Question 14 proved to be a good discriminating question. Many candidates struggled with questions requiring justification or interpretation.