Summary report of the 2016 ATAR course examination: Mathematics Applications

| Year | Number who sat | Number of absentees |
| :---: | :---: | :---: |
| 2016 | 8867 | 199 |

## Examination score distribution



## Summary

The examination had a mean of $63.72 \%$. Candidate scores ranged from $0.00 \%$ to $99.35 \%$. The standard deviation was $14.92 \%$. The section means were: Section One: Calculator-free $71.42 \%$ with a standard deviation of $14.75 \%$; and Section Two: Calculator-assumed $59.62 \%$ with a standard deviation of $16.03 \%$.

Attempted by 8864 candidates
Mean 63.72\%(/100) Max 99.35\% Min 0.00\%
Section means were:
Section One: Calculator-free
Section Two: Calculator-assumed
Mean 25.00(/35) Max $35.00 \quad$ Min 0.00
Mean 38.75(/65) Max $64.35 \quad$ Min 0.00

## General comments

The examination was well-balanced with a good proportion of simple and complex questions. Timing did not seem to be an issue as most candidates attempted all questions. Question 1 (minimum spanning tree) appeared to be the easiest on the paper with a mean of $86.94 \%$ and Question16 (annuities) appeared to be the most difficult with a mean of $42.26 \%$.

The syllabus requires candidates to 'explain', 'comment on' and 'give reasons'. Some struggled with this aspect. Candidates also had difficulty with the correct use of the new vocabulary used in the networks topic. Many candidates did not read questions carefully and lost easy marks. Also, it appeared that many candidates were not familiar with their calculator and failed to take full advantage of its features.

The network questions were answered well. Questions that required some written explanation were done poorly. It was disappointing that many candidates could not convert a score out of 50 to a percentage.

## Advice for candidates

- Read questions carefully to avoid losing easy marks.
- Make sure your explanations are clear and concise.
- If a question is worth two marks, show an intermediate step as this may result in a mark.
- Know the difference between a recursive rule and a general rule for a sequence.
- Use thick highlighters where necessary e.g. Question 14.

Advice for teachers

- Answers to money questions should be correct to two decimal places.
- Learning correct terminology needs to be emphasised regularly.
- Rounding correctly needs to be practised.

Comments on specific sections and questions
Section One: Calculator-free
Attempted by 8863 candidates $\quad$ Mean $25.00(/ 35) \quad$ Max $35.00 \quad$ Min 0.00
Most candidates attempted all questions in this section and found it easier generally than Section Two. Basic arithmetic and algebraic skills were lacking, especially in Question 4. The section contained some fairly routine questions. However, questions that required explanations were done poorly.

Section Two: Calculator-assumed
Attempted by 8857 candidates
Mean 38.75(/65) Max $64.35 \quad \operatorname{Min} 0.00$
Most candidates attempted all questions in this section. Candidates found this more difficult than the first section. Some of the finance questions proved a little difficult for some, especially Question 16. Clearly, some candidates could not use the finance app on their calculators. The setting out for the maximum flow question was quite untidy. Rounding was also an issue for some candidates.

