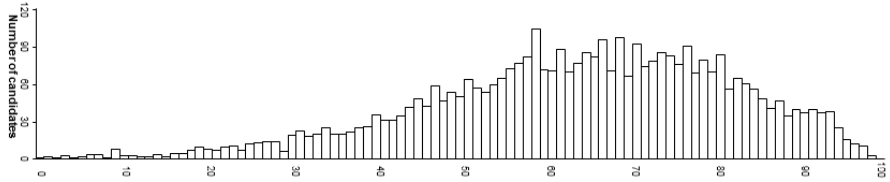
Government of **Western Australia**
School Curriculum and Standards Authority

Summary report for candidates on the 2015 WACE examination in
Mathematics 3C/3D

Year	Number who sat	Number of absentees
2015	3937	48
2014	2919	27
2013	3897	28

Examination score distribution - Written



Summary

The examination had a mean of 63.86%. Candidate scores for the examination ranged from a minimum of 0.00% to a maximum of 98.67% with a standard deviation of 18.21%. The section means were: Section One: Calculator-free 59.68% with a standard deviation of 20.74%; and Section Two: Calculator-assumed 65.98% and a standard deviation of 18.04%.

General comments

Written examination

The examination was well attempted by candidates indicating that there was enough time to answer all questions. Areas that were answered well by candidates were linear programming, differentiation and tangents, simultaneous equations and sample means and confidence intervals. Areas that were not answered well by candidates included geometric proofs, graphing techniques, conjectures and the use of the increments formula in percentage calculations.

Advice for candidates

- practise sketching graphs under test conditions
- accuracy is important to gain full marks and all relevant features should be clearly labelled
- ensure that you understand how to use calculators correctly

Comments on specific sections and questions

Section One: Calculator-free

Attempted by 3936 Candidates Mean 19.89(/33.33) Max 33.33 Min 0.00

Most candidates attempted all questions, time not being a factor. Candidates found this section more difficult than the calculator-assumed. This was due mainly to two reasons, graphing and proof writing. Graphing skills of many candidates was poor and needless marks were lost. This may in part be due to candidates' over reliance on CAS calculators for graphing. Candidates found the last question very difficult. This question involved a geometric proof that many candidates were unprepared for, especially part (b) which required candidates to construct their own triangles before presenting a proof. Questions that were well answered in this section included uniform probability distributions, simultaneous equations and differentiation.

Section Two: Calculator-assumed
Attempted by 3936 Candidates Mean 43.99(/66.66) Max 66.66 Min 0.00

Most candidates attempted all questions. Candidates were more successful in this section when compared to the Calculator-free. Questions that were well answered in this section included determining tangent lines, linear programming, integration and probability tree diagrams. Candidates utilised their CAS calculators appropriately in the use of integration and differentiation but could not cope with abstract terms such as found in Question 17 on small increment percentages. A main concern in this section was the failure of many candidates in setting up an optimisation solution in Question 18, obviously many candidates were relying too heavily on scaffolding to complete such a task.