Scholarship

2013 Assessment Report

Calculus

COMMENTARY

The level of this examination meant most candidates found several questions they could attempt.

The option parts in Questions 5 and 6 were answered by similar numbers of students. Question 1 was answered the most often, and Question 2 the least.

SCHOLARSHIP WITH OUTSTANDING PERFORMANCE

Candidates who were awarded Scholarship with Outstanding Performance typically:

- showed insight and flair with effective, purposeful solution methods
- applied skills and knowledge across different strands of the curriculum
- worked well within new mathematical contexts
- wrote clear explanations of their answers where required
- made connections between real-world and mathematical contexts
- checked for and self-corrected errors in working
- could identify special cases which limited their solutions.

SCHOLARSHIP

Candidates who were awarded Scholarship but not Scholarship with Outstanding Performance typically:

- could find factors and cancel appropriately
- used differentiation to prove a given integral
- used diagrams to support their answers
- had strong algebraic manipulation skills
- had strong differentiation skills.

OTHER CANDIDATES

Candidates who were not awarded Scholarship or Scholarship with Outstanding Performance typically:

- did not check their answers fit the question
- oversimplified real-world contexts inappropriately
- did not give answers in the required form
- had difficulty using logarithms
- did not fully answer part questions, or did not answer appropriately in context
- attempted the critical path analysis question with only a rudimentary understanding of the underlying mathematics
- did unnecessary algebraic manipulation
- relied on decimal approximations (perhaps from their calculator) where exact answers were required.