Sample Assessment Outline

Mathematics Specialist

ATAR Year 12

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Sample assessment outline

Mathematics Specialist – ATAR Year 12

Unit 3 and Unit 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Assessment  type** | **Assessment type weighting** | **Assessment**  **task weighting** | **When** | **Assessment** | **Syllabus content** |
| Response | 40% | 9% | Semester 1  Week 5 | **Task 1:** In-class test | **Complex numbers:** Cartesian forms and complex arithmetic using polar form, the complex plane, roots of complex numbers and factorisation of polynomials (3.1.1–3.1.15) |
| 11% | Semester 1  Week 13 | **Task 3:** In-class test | **Vectors in three dimensions:** the algebra of vectors, vector and Cartesian equations, vector calculus (3.3.1–3.3.8, 3.3.11–3.3.15) |
| 8% | Semester 2  Week 4 | **Task 5:** In-class test | **Statistical inference:** sample means and confidence intervals for means (4.3.1–4.3.7) |
| 12% | Semester 2  Week 12 | **Task 7:** In-class test | **Integration, rates of change and differential equations:** applications of differentiation (4.2.1–4.2.7), integration techniques and applications (4.1.1–4.1.7) |
| Investigation | 20% | 8% | Semester 1  Week 9 | **Task 2:** Students plan, research, conduct and communicate the findings of an investigation | Investigation task based on a selection of content from functions and sketching graphs (3.2.1–3.2.8) |
| 12% | Semester 2  Weeks 8/9 | **Task 6:** Students select, adapt and apply models to investigate and solve practical problems | Modelling taskbased on a selection of content from integration techniques and applications of integral calculus (4.1.1–4.1.7) |
| Examination | 40% | 15% | Semester 1  Week 15 | **Task 4: Semester 1 examination**  Two sections, Calculator-free (50 mins) and Calculator-assumed (100 mins) | Application of mathematical understanding and skills to analyse, interpret and respond to a variety of question types that require both open and closed responses based on Unit 3 content |
| 25% | Semester 2  Week 15 | T**ask 8: Semester 2 examination**  Two sections, Calculator-free (50 mins) and Calculator-assumed (100 mins) | Application of mathematical understanding and skills to analyse, interpret and respond to a variety of question types that require both open and closed responses based on Unit 3 and Unit 4 content |
| **Total** | **100%** | **100%** |  |  |  |