**Sample Assessment Outline**

Mathematics Applications

ATAR Year 12

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# Sample assessment outline

# Mathematics Applications – ATAR Year 12

## Unit 3 and Unit 4

| **Assessment type**  | **Assessment type weighting**  | **Assessment** **task weighting** | **When** | **Assessment** | **Syllabus content** |
| --- | --- | --- | --- | --- | --- |
| Response | 40% | 8% | Semester 1Week 7 | **Task 2:** In-class test | **Bivariate data analysis:** identifying and describing associations between categorical variables (3.1.2–3.1.5) **Growth and decay in sequences:** arithmetic sequences, geometric sequences (3.2.1–3.2.8) |
| 10% | Semester 1Week 14 | **Task 3:** In-class test | **Growth and decay in sequences:** Linear recurrence relations (3.2.9–3.2.11)**Graphs and networks:** the definition of a graph and associated terminology, planar graphs, paths and cycles (3.3.1–3.3.9) |
| 10% | Semester 2Week 5 | **Task 5:** In-class test | **Time series analysis:** describing, interpreting and analysing time series data (4.1.1–4.1.8)  |
| 12% | Semester 2Week 13 | **Task 7:** In-class assignment (open book) | **Networks and decision mathematics:** trees and minimum connector problems, project planning and scheduling using critical path analysis, flow networks (4.3.1–4.3.9) |
| Investigation | 20% | 10% | Semester 1Weeks 4–5 | **Task 1:** Plan, research and communicate findings using the statistical investigation process | **Bivariate data analysis:** identifying and describing associations between numerical variables (3.1.1, 3.1.5–3.1.19) |
| 10% | Semester 2Weeks 8–9 | **Task 6:** Select, adapt and apply models to investigate and compare everyday situations | **Loans, investments and annuities:** compound interest loans and investments, reducing balance loans, annuities and perpetuities (4.2.1–4.2.7) |
| Examination | 40% | 15% | Semester 1Week 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 2Week 15 | **Task 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%** |  |  |  |