



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

## **SAMPLE ASSESSMENT OUTLINE**

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**MATHEMATICS SPECIALIST**

**ATAR YEAR 12**

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## **Acknowledgement of Country**

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

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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	<b>Task 1:</b> In-class test	<b>Complex numbers:</b> 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	<b>Task 3:</b> In-class test	<b>Vectors in three dimensions:</b> 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	<b>Task 5:</b> In-class test	<b>Statistical inference:</b> sample means and confidence intervals for means (4.3.1–4.3.7)
		12%	Semester 2 Week 12	<b>Task 7:</b> In-class test	<b>Integration, rates of change and differential equations:</b> 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	<b>Task 2:</b> 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	<b>Task 6:</b> Students select, adapt and apply models to investigate and solve practical problems	Modelling task based 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	<b>Task 4: Semester 1 examination</b> 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	<b>Task 8: Semester 2 examination</b> 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
<b>Total</b>	<b>100%</b>	<b>100%</b>			