



QAMT SENIOR MATHEMATICS DAY 2025

Thursday 27 November, QUT Gardens Point, S Block - Draft program



Queensland
Association of
Mathematics
Teachers

Time				
8:30-9:10	Registration – Venue: QUT Gardens Point, S Block, 4th Floor foyer – Grab a coffee from the Humanity Coffee café (shipping container)			
9:10 – 9:30	Welcome – Monique Russell, QAMT President (Lecture theatre s403)			
9:30-10:25	All Developing Mathematical Discussions in the classroom Margaret Marshman, University of the Sunshine Coast (Room s407/s413)	General Mathematics Teaching Annuities in General Mathematics Corrie Wheare, MacGregor SHS <i>Building content knowledge and pedagogies</i> (Room s405)	Mathematical Methods/Specialist Mathematics Making judgments for a PSMT and writing a Mathematics examination Catherine Smith and Lidjia Vlastic, QCAA (Room s409) <i>Bring along current IA3's to self-review (or share with partners) to prepare for endorsement.</i>	
10:30:11:25		General Mathematics Reviewing Selected 2024 QCAA General Mathematics Exam Questions Peter Flynn, Texas Instruments (Room s405)		
11:30-12:00	Lunch and networking (Z block)			
12:00 – 12:55	All PSMT Discussion group <i>How you choose, develop and present your Essential/General Mathematics PSMT</i> (Room s404)	General, Essential and Numeracy Preparing for 2026 – Making judgments for a PSMT, writing a Mathematics examination, and progress on the online numeracy exam.	Mathematical Methods Reviewing Selected 2024 QCAA MM and SM Paper 2 Exam Questions - Peter Flynn Texas Instruments (Room s405)	Mathematical Methods and Specialist Mathematics Skills and thinking for Specialist and Mathematical Methods Tech-Active Papers - Matthew Overland, Brisbane State High School & Joe Ousby (Room s407)
1:00-1:55	Literacy in Mathematics - Esther Hohenheim, Assumption College, Warwick (Room s404)	Andrew Menon and Evan Winter, QCAA (Room s409) <i>Bring along current IA3s for General Maths or IA4s for Essential Maths,</i>	Mathematical Methods From Discrete to Continuous: Making Probability Click for Students Tom Sprenger, St Joseph's College (Gergory Terrace)	Mathematical Methods and Specialist Mathematics Applications of Trigonometric Functions in Astronomy –

		<i>to self-review (or share with partners) to prepare for endorsement.</i>	<i>Building content knowledge and pedagogies</i> (Room s405)	Stephen Broderick, St Ursula's College, Toowoomba <i>Building content knowledge and pedagogies</i> (Room s407)
2:00	Grab afternoon tea and join us for the 2025 QAMT AGM (Foyer)			
2:05-2:30	QAMT Annual General Meeting (Lecture theatre s403)			

Abstracts

Title	Abstract	Target Subject Area/s
Skills and thinking for Specialist and Mathematical Methods Tech-Active Papers	The workshop will give an overview of the past 5 years of external exams, mock papers and marking guides for specialist mathematics and mathematical methods. The intention is to highlight the different calculator skills and numerical thinking that can be applied for tech-active questions.	Specialist and Mathematical Methods
Teaching Annuities in General Mathematics	Annuities is often found to be the most complex topic for students and teachers in General Mathematics. This presentation aims to simplify the concepts visually, for students to understand, and then be able to access complex problems with combinations of annuities.	General Mathematics
Developing Mathematical Discussions in the classroom	Classroom discussions play a vital role in helping students develop the mathematical thinking and problem-solving skills necessary to develop the mathematical processes outlined in the Australian Curriculum: Mathematics. However, starting and managing these discussions can sometimes be difficult. In this workshop, we'll explore some practical strategies for leading meaningful mathematical conversations that bring student learning to the forefront.	All

From Discrete to Continuous: Making Probability Click for Students	Come along for a discussion-based session exploring strategies for teaching continuous and discrete random variables. I'll share practical approaches and resources that have helped students build conceptual understanding and unpack abstract, complex ideas. Whether you're introducing these concepts for the first time or refining your existing methods, this workshop is designed to get you thinking about your practice.	Mathematical Methods
Applications of Trigonometric Functions in Astronomy	Trigonometric functions will be used to model celestial motion, from our Moon's phases to distant exoplanets. Starting with sine and cosine functions to describe the Moon's cyclical phases and extend this to the orbital positions of Jupiter's moons, using circular motion and angular frequency. The same principles apply to exoplanets, where transits and radial velocity curves reveal orbital elements and masses. Kepler's Laws, especially the third law -tie these observations together, linking period and distance. TI-Nspire technology will be used to model, visualize and present data- bringing the harmony of the cosmos to life through mathematics.	Mathematical Methods and Specialist Mathematics
Literacy in Mathematics	Effective mathematical communication extends beyond numbers and symbols—it requires clear, structured writing that conveys reasoning, justifies solutions, and demonstrates understanding. This session explores practical strategies for integrating writing into senior mathematics classrooms, aligned with curriculum expectations and assessment standards. Participants will examine the role of written explanations in problem-solving, learn techniques for scaffolding mathematical writing, and engage with examples that promote precision and logical flow. By the end of the session, teachers will have actionable approaches to help students articulate their thinking	All

	confidently, bridging the gap between mathematical fluency and written expression.	
Andrew Menon and Evan Winter, QCAA	Preparing for 2026 – Making judgments for a PSMT, writing a Mathematics examination, and progress on the online numeracy exam. <i>Bring along current IA3s for General Maths or IA4s for Essential Maths, to self-review (or share with partners) to prepare for endorsement.</i>	Essential, General Mathematics and Numeracy
Catherine Smith and Lidjia Vlacic, QCAA - QCAA	Making judgments for a PSMT and writing a Mathematics examination	Mathematical Methods and Specialist Mathematics
Reviewing Selected 2024 QCAA MM and SM Paper 2 Exam Questions Peter Flynn, Texas Instruments	In this session, we will explore how selected questions from these examinations can be answered accurately and efficiently with TI-Nspire CX II. As part of our discussion, we will consider how these examination questions might positively inform future teaching and learning.	Mathematical Methods and Specialist Mathematics
Reviewing Selected 2024 QCAA General Mathematics Exam Questions Peter Flynn, Texas Instruments	In this session, we will explore how selected questions from these examinations can be answered accurately and efficiently with TI-Nspire CX II. As part of our discussion, we will consider how these examination questions might positively inform future teaching and learning.	General Mathematics
PSMT Discussion group	Bring along your ideas on how you choose, develop and present your Essential/General Mathematics PSMT to share with others.	Essential/General Mathematics