

Year 11 Mathematical Methods

Work rate calendar (WRC) 2025

Term 1

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	27 Jan – 31 Jan	Unit 1	Monday 27 January — Australia Day Holiday	Refer to Learning guides
			Tuesday 28 January – Welcome calls: Years Prep–12	
			Wednesday 29 January – Learning for success: Years Prep–12	
			Lesson 1 Introduction to methods course, pre-requisite test	
2	3 Feb – 7 Feb		Monday 3 February — Brainstorm Productions: Years 7–12 (11am–2pm)	Pre-requisite Test:
			Topic 1 Surds and quadratic functions	Due Monday 3 February
			Lesson 1 Surds – simplifying, multiplying and dividing Lesson 2 Surds – adding/subtracting, rationalising denominators Lesson 3 Catch-up/Tutorial if available	
3	10 Feb – 14 Feb		Friday 14 February — Senior orientation day: Years 10–12	
			Lesson 1 Solving quadratics – factorising Lesson 2 Solving quadratics – completing the square, quadratic formula, discriminant Lesson 3 Catch-up/Tutorial if available	
4	17 Feb – 21 Feb	Lessons 1 and 2 Sketching quadratic functions Lesson 3 Applications of quadratic functions		
5	24 Feb – 28 Feb	Topic 2 Binomial expansion and cubic functions		
		Lesson 1 Combinations, Pascal's triangle Lesson 2 Pascal's triangle, binomial theorem Lesson 3 Polynomials, expanding quadratic and cubic polynomials		
6	3 Mar – 7 Mar	Lesson 1 Cubic functions Lesson 2 Solving cubic equations Lesson 3 Cancelled due to Cyclone Alfred		
7	10 Mar – 14 Mar	Lesson 1 Cancelled due to Cyclone Alfred Lesson 2 Cubic applications		
		Topic 3 Functions and relations		
		Lesson 3 Functions and relations		
8	17 Mar – 21 Mar	Lesson 1 Function notation, domain and range Lesson 2 Piece-wise functions and applications Lesson 3 Hyperbolas and applications		
9	24 Mar – 28 Mar	Topic 4 Trigonometric functions	No exam for MAM11 in this exam block.	
		Lesson 1 Exact values, radians, arc length, area of sectors Lesson 2 Unit circle, boundary angles		
		Exams: Year 11 Thursday 27 March – Wednesday 2 April		
10	31 Mar – 4 Apr	Thursday 3 April — Cross country / Fun run: Prep – Year 12		
		Exams: Year 11 Thursday 27 March – Wednesday 2 April		
		Lesson 1 Catch-up/Tutorial if available		

Year 11 Mathematical Methods

Work rate calendar (WRC) 2025

Term 2

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	21 Apr – 25 Apr	Unit 1	Monday 21 April — Easter Monday	Refer to Learning guides
			Tuesday 22 April – Thursday 24 April — School camp: Year 11	
			Friday 25 April — Anzac Day	
			Optional lessons for student not on camp. Note: This will not be assessed.	
			Topic 3 Functions and relations	
			Lesson 1 Circles and applications	
			Lesson 2 Sideways parabolas and applications	
2	28 Apr – 2 May	Unit 1	Topic 4 Trigonometric functions	
			Lessons 1 and 2 Unit circle, periodicity, exact values in radians Lesson 3 Trigonometric graphs	
3	5 May – 9 May	Unit 1	Monday 5 May — Labour Day	
			Lesson 1 Trigonometric graphs Lesson 2 Solving trigonometric equations, Pythagorean identity Lesson 3 Catch-up/Tutorial if available	
			Lesson 1 Solving trigonometric equations, Pythagorean identity Lessons 2 and 3 Modelling trigonometric functions	
4	12 May – 16 May	Unit 1	Topic 5 Probability	
			Lesson 1 Probability Lesson 2 Relative frequency Lesson 3 Conditional probability	
			Lesson 1 Independence Revision Lessons 2 and 3 Revision	
5	19 May – 23 May	Unit 1	FA1 – Exam	FA1 (Exam) To be received at BrisbaneSDE by 5 pm Friday 6 June
			Lessons 1 – 3 Revision	
6	26 May – 30 May	Unit 2	Topic 1 Exponential functions	
			Lesson 1 Indices and index laws Lesson 2 Indices, index laws and scientific notation Lesson 3 Solving equations involving exponential functions	
			Lesson 1 Sketching exponential functions Lesson 2 Applications of exponential functions Topic 2 Logarithms and logarithmic functions Lesson 1 Logarithmic laws	
7	2 Jun – 6 Jun	Unit 2	Friday 27 June — Athletics carnival / Sports day: Prep – Year 12	FA2 (PSMT) Released in QLearn Monday 23 June
			FA2 – Assignment (PSMT)	
			Lesson 1 Assignment introduction Lesson 2 FA1 Review Lesson 3 Catch-up if available	
8	9 Jun – 13 Jun	Unit 2	Lesson 1 Indices and index laws Lesson 2 Indices, index laws and scientific notation Lesson 3 Solving equations involving exponential functions	
			Lesson 1 Sketching exponential functions Lesson 2 Applications of exponential functions Topic 2 Logarithms and logarithmic functions Lesson 1 Logarithmic laws	
			Lesson 1 Assignment introduction Lesson 2 FA1 Review Lesson 3 Catch-up if available	
9	16 Jun – 20 Jun	Unit 2	Lesson 1 Indices and index laws Lesson 2 Indices, index laws and scientific notation Lesson 3 Solving equations involving exponential functions	
			Lesson 1 Sketching exponential functions Lesson 2 Applications of exponential functions Topic 2 Logarithms and logarithmic functions Lesson 1 Logarithmic laws	
			Lesson 1 Assignment introduction Lesson 2 FA1 Review Lesson 3 Catch-up if available	
10	23 Jun – 27 Jun	Unit 2	Friday 27 June — Athletics carnival / Sports day: Prep – Year 12	FA2 (PSMT) Released in QLearn Monday 23 June
			FA2 – Assignment (PSMT)	
			Lesson 1 Assignment introduction Lesson 2 FA1 Review Lesson 3 Catch-up if available	

Disclaimer: Information contained in this document is correct at time of publishing.

Year 11 Mathematical Methods

Work rate calendar (WRC) 2025

Term 3

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	14 Jul – 18 Jul	Unit 2	FA2 Lessons 1–3 Assignment lessons	FA2 (PSMT) Checkpoint 1: To be submitted to QLearn by Friday 18 July
2	21 Jul – 25 Jul		Topic 2 Logarithms and logarithmic functions Lesson 1 Solving equations involving indices and logarithmic functions Lesson 2 Sketching logarithmic functions Lesson 3 Applications of logarithmic functions	
3	28 Jul – 1 Aug		Lesson 1 Applications of logarithmic functions Topic 3 Introduction to differential calculus Lesson 2 Average rate of change Lesson 3 Derivatives using first principles	FA2 (PSMT) Checkpoint 2: Draft To be submitted to QLearn by 5 pm Monday 28 July
4	4 Aug – 8 Aug		Lesson 1 Derivative rule for power and polynomial functions Lesson 2 Interpreting derivatives Lesson 3 Properties of derivatives	
5	11 Aug – 15 Aug		Wednesday 13 August — Royal Queensland (Ekka) Show Holiday Topic 4 Applications of differential calculus Lesson 1 Instantaneous rates of change Lesson 2 Equations of tangents and normal Lesson 3 Catch-up/Tutorial if available	
6	18 Aug – 22 Aug		Lesson 1 Displacement-time graphs, velocity Lesson 2 Stationary points, sketching polynomials Lesson 3 Stationary points, sketching polynomials	FA2 (PSMT) Checkpoint 3: Final To be submitted to QLearn by 5 pm Monday 18 August
7	25 Aug – 29 Aug		Topic 5 Further differentiation Lesson 1 Differentiation rules – composite functions, chain rule Lesson 2 Differentiation rules – product rule Lesson 3 Differentiation rules – quotient rule	
8	1 Sept – 5 Sept		Friday 5 September — Student free day Lesson 1 Differentiation rules – combinations of the three rules Revision Lessons 2 – 3 Revision	
9	8 Sept – 12 Sept		FA3 – Exam Lessons 1 – 3 Revision	FA3 (Exam) To be received at BrisbaneSDE by 5 pm Friday 12 September
10	15 Sept – 19 Sept		Exams: Year 11 Monday 15 September – Friday 19 September Friday 19 September — Connect day: Years 11–12	

Year 11 Mathematical Methods

Work rate calendar (WRC) 2025

Term 4

All students are expected to participate in all online lessons and complete all assessment as outlined in this **Work rate calendar**.

Teachers may adjust topics, class work, assessment and submission dates. Adjustments will be communicated via QLearn or during lessons.

Assessment				
Supervised assessment		Summative exams are to be supervised by the student's official exam supervisor.		
Non-supervised assessment		Students must sign declaration of academic integrity.		
Week	Dates	Unit	Topic	Class work / Assessment to be submitted
1	6 Oct – 10 Oct	Unit 3	Monday 6 October — King's Birthday Holiday	IA1 (PSMT)
			Topic 1 Differentiation of exponential and logarithmic functions	Released in QLearn
Lesson 1 The exponential function, Euler's constant, limits	Tuesday 6 October			
Lesson 2 Derivative of exponential functions				
Lesson 3 Catch-up/Tutorial if available				
2	13 Oct – 17 Oct		Lesson 1 Assignment introduction	IA1 (PSMT)
			Lesson 2 Applications involving derivatives of exponential functions	Checkpoint 1:
			Lesson 3 Natural logarithms, features of the logarithmic function	To be submitted to QLearn Friday 17 October
3	20 Oct – 24 Oct		Lessons 1 – 3 Assignment	
4	27 Oct – 31 Oct		Lesson 1 Solving equations involving exponential and logarithmic functions	IA1 (PSMT)
		Lesson 2 Derivative of natural logarithmic functions	Checkpoint 2: Draft	
		Lesson 3 Applications involving derivatives of logarithmic functions	To be submitted to QLearn by 5 pm Friday 31 October	
5	3 Nov – 7 Nov	Topic 2 Differentiation of trigonometric functions and differentiation rules		
		Lesson 1 Derivatives of trigonometric functions		
		Lesson 2 Review of solving trigonometric functions		
6	10 Nov – 14 Nov	Lesson 3 Applications involving trigonometric functions and their derivatives		
		Lesson 1 Differentiation rules		
7	17 Nov – 21 Nov	Lessons 2 and 3 Assignment draft feedback		
		Friday 21 November — Aquatic carnival: Prep – Year 11	IA1 (PSMT)	
		Lesson 1 Differentiation rules	Checkpoint 3: Final	
8	24 Nov – 28 Nov	Topic 3 Further applications of differentiation	To be submitted to QLearn by 5 pm Friday 21 November	
		Lesson 2 The second derivative, acceleration		
		Lesson 3 Catch-up/Tutorial if available		
9	1 Dec – 5 Dec	Exams: Year 11		
		Monday 24 November – Friday 28 November		
		Friday 28 November — Final day: Years 10–11		
10	8 Dec – 12 Dec			