

Year 12 Specialist Mathematics

Work rate calendar (WRC) 2024

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	22 Jan – 26 Jan	Unit 3	Monday 22 January — Welcome calls for students: Prep – Year 12	
			Wednesday 24 January — Learning for success: Prep – Year 12	
			Friday 26 January — Australia Day Holiday	
			Topic 3 Complex numbers	
2	29 Jan – 2 Feb		Lesson 1 Revision of complex numbers	
			Lesson 1 Prove and use identities involving modulus and argument	
			Lesson 2 Using De Moivre's Theorem to prove trig identities	
3	5 Feb – 9 Feb		Lesson 3 Equations of subsets on the complex plane — lines and circles.	
			Friday 9 February — Senior orientation day: Years 10–12	
4	12 Feb – 16 Feb		Lessons 1 Roots of complex numbers	
		Lessons 2 & 3 Factor and remainder theorems applied to complex numbers		
5	19 Feb – 23 Feb	Lesson 1 Conjugate root theorem		
		Lessons 2 & 3 Solving complex polynomial equations		
6	26 Feb – 1 Mar	Revision		
		Lessons 1, 2 & 3 Catch up and/or revision		
7	4 Mar – 8 Mar	Lessons 1, 2 & 3 revision		
		Lessons 1, 2 & 3 revision		
8	11 Mar – 15 Mar	Revision and exam		
		Lessons 1, 2 & 3 revision and exam		
9	18 Mar – 22 Mar	Unit 4	IA2 Exam	
			To be received at BrisbaneSDE by 5 pm Friday 15 March	
10	25 Mar – 29 Mar		Topic 1 Integration	
			Lessons 1 & 2 Integration by substitution	
10	25 Mar – 29 Mar		Lesson 3 Integration using trig identities	
			Thursday 28 March — Cross country / Fun run: Prep – Year 12	
10	25 Mar – 29 Mar		Friday 29 March — Good Friday	
			Lesson 1 Inverse trig functions arcsine, arccosine, arctangent	
10	25 Mar – 29 Mar		Lesson 2 The derivative of the inverse trig functions	
			Lesson 3 Catch-up/Tutorial	

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Term 2

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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	15 Apr – 19 Apr	Unit 4	Lesson 1 The integral of $\frac{\pm 1}{\sqrt{a^2-x^2}}$ and $\frac{a}{\sqrt{a^2+x^2}}$ Lesson 2 Integration by parts Lesson 3 Integration by partial fractions	
2	22 Apr – 26 Apr		Thursday 25 April — Anzac Day Lesson 1 Simpson's rule Lesson 2 Area between curves Lesson 3 Catch up	
3	29 Apr – 3 May		Lesson 1 Volumes of solids of revolution Lesson 2 The probability density function Lesson 3 Catch-up	
4	6 May – 10 May		Monday 6 May — Labour Day Topic 2 Rates of change Lesson 1 Implicit differentiation Lesson 2 Related rates of change Lesson 3 First order differential equations	
5	13 May – 17 May		Lessons 1 & 2 First order differential equations Lesson 3 Slope fields of first order differential equations.	
6	20 May – 24 May		Lessons 1, 2 & 3 Applications of differential equations	
7	27 May – 31 May		Lessons 1, 2 & 3 Momentum and resultant forces	
8	3 Jun – 7 Jun		Lesson 1 Simple harmonic motion Lessons 2 & 3 Non-uniform motion and differential equations	
9	10 Jun – 14 Jun		Monday 10 June – Thursday 13 June — School camp: Year 11 Topic 3 Statistical inference Lessons 1, 2 & 3 Sample means, simulations and approximation of the normal distribution	
10	17 Jun – 21 Jun		Thursday 20 June — Senior formal: Year 12 Friday 21 June — Athletics carnival / Sports day: Prep – Year 12 Lesson 1 Sample statistics Lesson 2 Confidence intervals using the sample mean Lesson 3 Simulations.	

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Term 3

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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	8 Jul – 12 Jul	Unit 4	Lessons 1 – 3 Catch up lessons	
2	15 Jul – 19 Jul		IA3 Revision Lessons 1 – 3 Revision	
3	22 Jul – 26 Jul		Lessons 1 – 3 Revision	
4	29 Jul – 2 Aug		Lessons 1 – 3 Revision and exam	IA3 Exam To be received at BrisbaneSDE by 5 pm Friday 2 August
5	5 Aug – 9 Aug	External exam preparation	External exam preparations Lessons 1 – 3 external exam preparations.	
6	12 Aug – 16 Aug		Wednesday 14 August — Royal Queensland (Ekka) Show Holiday Lessons 1 – 3 external exam preparations.	
7	19 Aug – 23 Aug		Lessons 1 – 3 external exam preparations.	
8	26 Aug – 30 Aug		Mock exams: Year 12 Monday 26 August – Thursday 29 August Friday 30 August — Student free day	
9	2 Sept – 6 Sept		Mock exams: Year 12 Monday 2 September – Friday 6 September	
10	9 Sept – 13 Sept		Friday 13 September — Connect excursion: Years 10–12 External exam preparations Lessons 1 – 3 external exam preparations.	

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Term 4

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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	30 Sept – 4 Oct	External exam preparation	External exam preparations Lessons 1 – 3 external exam preparations.	
2	7 Oct – 11 Oct		Monday 7 October — King's Birthday Holiday Lessons 1 – 3 external exam preparations.	
3	14 Oct – 18 Oct		Lessons 1 – 3 external exam preparations.	
4	21 Oct – 25 Oct		Exams: Year 12 Monday 21 October – Friday 25 October	
5	28 Oct – 1 Nov		Exams: Year 12 Monday 28 October – Friday 1 November	
6	4 Nov – 8 Nov		Exams: Year 12 Monday 4 November – Friday 8 November	
7	11 Nov – 15 Nov		Exams: Year 12 Monday 11 November – Wednesday 13 November Thursday 14 November — Graduation: Year 12 Friday 15 November — Final day: Year 12	
8	18 Nov – 22 Nov			
9	25 Nov – 29 Nov			
10	2 Dec – 6 Dec			
11	9 Dec – 13 Dec			