

2026 NATIONAL ATP: MATHEMATICS GRADE 12 – TERM 1

TERM 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Topics	Number patterns, sequences and series				Functions: Formal definition; inverses, exponential and logarithmic			Trigonometry			
Suggested dates	14/01/26 – 6/2/2026 (18 days)				9/02/2026 – 27/02/2026 (15 days)			2/03/2026 – 27/03/2026 (19 days)			
Date Completed											
SBA	Investigation (must be completed before the end of week 6)										Test (content term 1)

2026 NATIONAL ATP: MATHEMATICS GRADE 12 – TERM 2

TERM 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Topics	Euclidean Geometry		Analytical Geometry		Differential Calculus including Polynomials						
Suggested dates	8/4/26 – 20/4/26 (9 days)		21/4/26 – 4/5/26 (9 days)		5/5/2026 – 3/6/2026 (22 days)				4/6/26 – 26/06/26 (15 days)		
Date Completed											
SBA	Assignment (must be complete before the end of week 6)								JUNE EXAM		

2026 NATIONAL ATP: MATHEMATICS GRADE 12 – TERM 3

TERM 3	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Topics	Finance, growth and decay			Statistics		Counting and Probability			Trial Exam	
Suggested dates	21/7/2026 – 5/8/2026 (12 days)			6/8/26 – 18/8/26 (8 days)		19/8/26 – 28/8/26 (8 days)		31/8/2026 – 23/9/2026 (18 days)		
Date Completed										
SBA	Test (must be complete before the end of week 6)								TRIAL EXAMINATION	

2026 NATIONAL ATP: MATHEMATICS GRADE 12 – TERM 4

TERM 4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	EXAM	
Topics	Revision				Final Examination						PAPER 1 150 marks 3 h	
SBA											Algebraic expressions, equations and inequalities	26
											Number patterns	26
											Functions and graphs	35
											Finance, growth and decay	15
											Differential Calculus	35
											Counting Principle and Probability	15
TOTAL NUMBER OF SBA TASKS 6											PAPER 2 150 marks 3 hours	
Term 1 Investigation (15%) and Test (15%)											Statistics	20
Term 2 Assignment (15%) and June Exam/ Control Test (15%)											Analytical Geometry	40
Term 3 Test (15 %) and Trial (26 %)											Trigonometry	50
Term 4 Final Examination											Euclidean Geometry	40

2026 NATIONAL ATP: MATHEMATICS GRADE 12 – TERM 1

TERM 1	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Topics	Patterns, sequences and series				Functions			Trigonometry			
	1. Patterns: Revise number patterns leading to those where there is a constant second difference between consecutive terms, and the general term is therefore quadratic. 2. Number patterns, including arithmetic and geometric sequences and series 3. Sigma notation 4. Derivation and application of the formulae for the sum of arithmetic and geometric series: 4.1 $S_n = \frac{n}{2}[2a + (n-1)d]; S_n = \frac{n}{2}(a + l)$ 4.2 $S_n = \frac{a(r^n - 1)}{r - 1}; (r \neq 1);$ and 4.3 $S_\infty = \frac{a}{1 - r}; (-1 < r < 1), (r \neq 1)$				1. Definition of a <i>function</i> . 2. General concept of the <i>inverse of a function</i> and how the domain of the function may need to be restricted (in order to obtain a one-to-one function) to ensure that the inverse is a function. 3. Determine and sketch graphs of the inverses of the functions defined by $y = ax + q;$ $y = ax^2$ $y = b^x; b > 0; b \neq 1$ Focus on the following characteristics: domain and range, intercepts with the axes, turning points, minima, maxima, asymptotes (horizontal and vertical), shape and symmetry, average gradient (average rate of change), intervals on which the function increases /decreases. 4. Revision of the exponential function and the exponential laws and graph of the function defined by $y = b^x$ where $b > 0$ and $b \neq 0$ 5. Understand the definition of a logarithm: $y = \log_b x \Leftrightarrow x = b^y$ where $b > 0$ and $b \neq 1$ 6. The graph of the function, $y = \log_b x$ for both the cases $0 < b < 1$ and $b > 1$.			1. Compound angle identities: $\sin(\alpha \pm \beta) = \sin \alpha \cos \beta \pm \sin \beta \cos \alpha$ $\cos(\alpha \pm \beta) = \cos \alpha \cos \beta \pm \sin \alpha \sin \beta$ $\sin 2\alpha = 2 \sin \alpha \cos \beta$ $\cos 2\alpha = \cos^2 \alpha - \sin^2 \alpha$ $= 2 \cos^2 \alpha - 1$ $= 1 - 2 \sin^2 \alpha$ 2. Revise the proof of the sine, cosine and area rules. 3. Solve problems in two and three dimensions applying the sine, cosine and area rules.			
Date completed											
SBA	Test (content term 1)				Investigation			&			

2026 NATIONAL ATP: MATHEMATICS GRADE 12 – TERM 2

TERM 2	Week 1	Week 2	Week 3	Week 4	Week 5 -6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Topics	Euclidean Geometry		Analytical Geometry		Differential Calculus including Polynomials				JUNE EXAMINATION / CONTROL TEST		
	1. Revise earlier work on the necessary and sufficient conditions for polygons to be similar. 2. Prove (accepting results established in earlier grades): - that a line drawn parallel to one side of a triangle divides the other two sides proportionally (and the Mid-point Theorem as a special case of the converse of this theorem); - that equiangular triangles are similar; - that triangles with sides in proportion are similar; and - the Pythagorean Theorem by similar triangles		1. Revise the following including grade 10 concepts: - the equation of a line through two given points; - the equation of a line through one point and parallel or perpendicular to a given line; and - The inclination (θ) of a line, where $m = \tan \theta$ is the gradient of the line ($0^\circ \leq \theta \leq 180^\circ$) 2. Apply the equation $(x - a)^2 + (y - b)^2 = r^2$ that defines a circle with radius r and centre $(a; b)$. 3. Determine the equation of a tangent to a given circle.		1. Factorise third-degree polynomials. Apply the Remainder and Factor Theorems to polynomials of degree at most 3 (no proofs required). 2. An intuitive understanding of the limit concept, in the context of approximating the rate of change or gradient of a function at a point. 3. Use limits to define the derivative of a function f at any x : $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ Generalise to find the derivative of f at any point x in the domain of f , i.e., define the derivative function $f'(x)$ of the function $f(x)$. Understand intuitively that $f'(a)$ is the gradient of the tangent to the graph of f at the point with x -coordinate a . 4. Using the definition (first principle), determine the derivative, $f'(x)$ where a , b and c are constants: 4.1 $f(x) = ax^2 + bx + c$; 4.2 $f(x) = ax^3$; 4.3 $f(x) = \frac{a}{x}$ and 4.4 $f(x) = c$.						



5. Use the formula, $\frac{d}{dx}(ax^n) = anx^{n-1}$ (for any real number n) together with the rules 5.1
- $$\frac{d}{dx}[f(x) \pm g(x)] = \frac{d}{dx}[f(x)] \pm \frac{d}{dx}[g(x)]$$
- and
- 5.2 $\frac{d}{dx}[kf(x)] = k \frac{d}{dx}[f(x)]$, (k a constant)
6. Determine equations of tangents to graphs of functions.
7. Introduce the second derivative $f''(x) = \frac{d}{dx}(f'(x))$ of $f(x)$ and how it determines the concavity of a function.
8. Sketch graphs of cubic polynomial functions using differentiation to determine the coordinates of stationary points, and points of inflection (where concavity changes). Also, determine the x -intercepts of the graph using the factor theorem and other techniques.
9. Solve practical problems concerning optimisation and rate of change, including calculus of motion.

Date completed				
SBA	Assignment			JUNE EXAM / CONTROL TEST

- the use of Venn diagrams to solve

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Term 3 Test (15 %) and Trial (26 %)											Euclidean Geometry	40
Term 4 Final Examination											Trigonometry	50