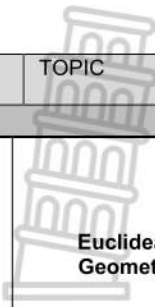**GAUTENG PROVINCE**
MATHEMATICS – ANNUAL TEACHING PLAN –GRADE 10
GRADE 10 ATP 2025 FINAL

GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA
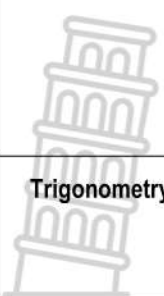
DATE	TOPIC	CONTENT	F	ASSESSMENT		% Completed
TERM 1				**2 TASKS FOR TERM 1**		
Week 1 15/1 – 17/1 (3 days)	**Algebraic Expression**	1.Understand that real numbers can be rational or irrational.(Revise Number System) 2.Establish between which two integers a given simple surd lies. 3. Round real numbers to an appropriate degree of accuracy.				**3%**
Week 2 20/1 – 24/1 (5 days)	**Algebraic Expression**	Revise multiplication of monomial by binomial and trinomial and binomial by binomial 4. Multiplication of a binomial by a trinomial. 5. Factorization to include types taught in Grade 9 and: • Revise difference of squares • trinomials • grouping in pairs				**6%**
Week 3 27/1 – 31/1 (5 days)	**Algebraic Expression**	• sum and difference of two cubes 6. Simplifying, adding, and subtracting algebraic fractions using factorization with denominators of cubes (limited to sum and difference of cubes).	F	Investigation / Project 25% SBA		**9%**
Week 4 3/2 – 7/2 (5 days)	**Exponents , Algebraic Expression**	1. Revise laws of exponents learnt in Grade 9 were $x, y > 0; m, n \in \square$ • $x^m \times x^n = x^{m+n}$ • $x^m \div x^n = x^{m-n}$ • $\left(x^m\right)^n = x^{mn}$				**12%**
Week 5 10/2 – 14/2 (5 days)	**Exponents, equations, and inequalities**	• $x^m \times y^m = \left(xy\right)^m$ Also, by definition: $x^{-n} = \dfrac{1}{x^n}$, $x \neq 0$ and $x^0 = 1$, $x \neq 0$ 2. Use the laws of exponents to simplify expressions and solve equations, accepting that the rules also hold for $m, n \in \mathbf{Q}.$ 3.1 Revise the solution of linear equations.				**15%**

		3.2 Solve quadratic equations (by factorisation).			
Week 6 17/2 –21/2 (5 days)	Exponents, equations, and inequalities	3.3 Solve simultaneous linear equations in two unknowns. 3.4 Solve word problems involving linear, quadratic, or simultaneous linear equations			18%
Week 7 24/2 – 28/2 (5 days)	Exponents, equations, and inequalities	3.5. Solve literal equations (changing the subject of a formula). 3.6. Solve linear inequalities (and show solution graphically). Interval notation must be known.			21%
Week 8 3/3 – 7/3 (5 days)	Trigonometry	Revise the Pythagoras Theorem 1. Define the trigonometric ratios $sin\theta, cos\theta$ and $tan\theta$ Using the right – angled triangle. 2. Extend the definitions of $sin\theta; cos\theta$ and $tan\theta$ for $0° \leq \theta \leq 360°$.			24%
Week 9 10/3 – 14/3 (5 days)	Trigonometry	3. Define the reciprocal of the trigonometric ratios $cosec\theta, sec\theta$ and $cot\theta$, using the right – angled triangles (these three reciprocals should be examined in grade 10 only) 4. Use a diagram to determine the numerical values of ratios for angles from 0° to 360°	F	Test 75% SBA	27%
Week 10 17/3 – 21/3 (4 days)	Trigonometry	5. Derive values of the trigonometric ratios for the special cases (without using a calculator $\theta \in \{0°; 30°; 45°; 60°; 90°\}$ 6. Solve simple trigonometric equations for angles between 0° and 90°			30%
Week 11 24/3 – 28/3 (5 days)	Euclidean Geometry	1. Revise basic results established in earlier grades regarding lines, angles and triangles, especially the similarity and congruence of triangles			33%

END OF TERM 1 SCHOOLS CLOSES ON 28/03/2025

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DATE	TOPIC	CONTENT	F	ASSESSMENT	Date Completed	% Completed
TERM 2				**2 TASKS FOR TERM 2**		
Week 1 8/4 – 11/4 (4 days)	**Euclidean Geometry**	2. Define the following special quadrilaterals: Kite, parallelogram, rectangle, rhombus, square and trapezium. Investigate and make conjectures about the properties of the sides, angles, diagonals, and areas of these quadrilaterals. Prove these conjectures				**36%**
Week 2 14/4 –18/4 (4 days)	**Euclidean Geometry**	4. **The following proofs are examinable** • The opposite sides and angles of a parallelogram are equal. • The diagonals of a parallelogram bisect each other. • If one pair of opposite sides of a quadrilateral are equal and parallel the quadrilateral is a parallelogram. • The diagonals of a rectangle are equal. • The diagonals of a rhombus bisect each other at right angle and bisect the interior angles. Solve problems and prove riders using the properties of parallel lines, triangles, and quadrilaterals.				**39%**
Week 3 21/4 – 25/4 (5 days)	**Euclidean Geometry**	5. Investigate line segment joining the midpoints of two sides of a triangle. **The following theorem is examinable** The line segment joining the midpoints of two sides of a triangle is parallel to the third side and equal to half the length of the third side Solve problems and prove riders using the properties of parallel lines, triangles, quadrilaterals, and midpoint theorem.				**42%**
Week 4 28/4 – 02/5 (5 days)		28 Freedom Day Observed 29 and 30 April Special School Holidays 01 May Workers Day 02 May Special School Holiday				
Week 5 5/5 – 9/5 (5 days)	**Analytical Geometry**	Represent geometric figures on a Cartesian co-ordinate system. Derive and apply for any two points $(x_1; y_1)$ and $(x_2; y_2)$ the formulae for calculating the: 1.**Distance** between the two points.	F	**ASSIGNMENT 25% SBA**		**45%**

Week 6 12/5 – 16/5 (5 days)	Analytical Geometry	2. **Gradient** of the line segment connecting the two points (and from that identify parallel and perpendicular lines); and 3. Coordinates of the **Mid-point** of the line segment joining the two points.			**48%**
Week 7 19/5 – 23/5 (5 days)	Functions and Graphs	1. The concept of a function, where a certain quantity (output value) uniquely depends on another quantity (input value). Work with relationships between variables using tables, graphs, words, and formulae. Convert flexibly between these representations. **Note**: the graph defined by $y = x$ should be known from grade 9 2. Point by point plotting of basic graphs defined by $y = x$ 3. Investigate the effect of a and q in $$y = ax + q$$ to discover shape, domain (input values), range (output values), asymptotes, axes of symmetry, turning points and intercepts on the axes (where applicable).			**52%**
Week 8 26/5 – 30/5 (5 days)	Functions and Graphs	2. Point by point plotting of basic graphs defined by $f(x) = x^2$ 3. Investigate the effect of a and q in $$f(x) = ax^2 + q$$ to discover shape, domain (input values), range (output values), asymptotes, axes of symmetry, turning points and intercepts on the axes (where applicable).			**54%**
Week 09 2/6 – 6/6 (5 days)	Functions and Graphs	2. Point by point plotting of basic graphs defined by $f(x) = \dfrac{1}{x}$ 3. Investigate the effect of a and q in and $f(x) = \dfrac{a}{x} + q$ to discover shape, domain (input values), range (output values), asymptotes, axes of symmetry, turning points and intercepts on the axes (where applicable).			**58%**
Week 10 9/6 – 13/6 (5 days)	June Examination	June Examination	June Examination		
Week 11 16/6 – 20/6 (4 days)	June Examination	June Examination	June Examination		
Week 12 23/6-27/6 (5 days)	June Examination	June Examination	June Examination		
END OF TERM 2 SCHOOLS CLOSES ON 27/06/2025					

DATE	TOPIC	CONTENT	F	ASSESSMENT	Date Completed	% Completed
TERM 3				**2 TASKS FOR TERM 3**		
Week 1 22/7 –25/7 (4 days)	**Functions and Graphs**	2.Point by point plotting of basic graphs defined by $y = b^x ; b > 0$ 3.Investigate the effect of a and q in $y = ab^x + q; b > 0, b \neq 1$ to discover shape, domain (input values), range (output values), asymptotes, axes of symmetry, turning points and intercepts on the axes (where applicable).				**61%**
Week 2 28/7 – 1/8 (5 days)	**Trigonometric Functions**	4.Point by point plotting of basic graphs defined by, $y = \sin \theta,$ $\theta \in [0°;360°]$ Study the effect of a and q on the graphs defined by: • $y = a \sin \theta + q$; • $y = \cos \theta$ for $\theta \in [0°;360°]$ where a and q $\in Q$ and $\theta \in [0°;360°]$ discover shape , range, turning points , intercepts, amplitude, asymptotes, increasing decreasing (where applicable)				**64%**
Week 3 4/8 –8/8 (5 days)	**Trigonometric Function**	4.Point by point plotting of basic graph defined by, $y = \cos \theta$ for $\theta \in [0°;360°]$ Study the effect of a and q on the graphs defined by: • $y = \tan \theta$ for $\theta \in [0°;360°]$ Where a and q $\in Q$ and $\theta \in [0°;360°]$ discover shape, range, turning points, intercepts, amplitude, asymptotes, increasing decreasing (where applicable)				**67%**
Week 4 11/8 – 15/8 (5 days)	**Trigonometric Functions**	6. Sketch graphs, determine the equations of given graphs and **INTERPRET** graphs. **INTERPRET** with focus on • Determining the equation • Intercepts with axis • Amplitude • Period • Vertical and horizontal Lengths • Point of intersection • Inequalities • Reflection about x – axis and vertical translation	F	TEST 50%		**69%**

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		Note : Sketching of the graphs must be based on the observation of the effect of a and q (a, a vertical stretch and/or a reflection about the x-axis and q a vertical shift)				
Week 5 18/8 - 22/8 (5 days)	**Trigonometry (2D)**	1. Solve two dimensional problems involving right angled – triangle 2. Problems in two dimensional				**73%**
Week 6 25/8 – 29/8 (5 days)	**Statistics**	1. Measures of central tendency in ungrouped data. Calculate the mean. Determine the median and the mode. 2. Measures of central tendency in grouped data: calculation of mean estimate of grouped and ungrouped data and identification of modal interval and interval in which the median lies. 3. Range as a measure of dispersion and extension to include percentiles, quartiles, inter-quartile, and semi-inter-quartile range. 4. Five number summary (maximum , minimum and quartiles) and box and whisker diagram.				**76%**
Week 7 1/9 – 5/9 (5 days)	**Statistics**	5. Use the statistical summaries (measures of central tendency and dispersion), and graphs to analyse and make meaningful comments on the context associated with the given data. 6. Represent the data on bar graphs, line graphs and Histogram				**79%**
Week 8 8/9 – 12/9 (5 days)	**Probability**	1.The use of probability models to compare the relative frequency of events with the theoretical probability. 2.The use of Venn diagrams to solve probability problems, deriving and applying the following for any two events in a sample space S: $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$				**82%**
Week 9 15/9 – 19/9 (5 days)	**Probability**	A and B are Mutually exclusive if $P(A \text{ and } B) = 0$; A and B are complementary if they are mutually exclusive; and $P(A) + P(B) = 1$. then $P(B) = P(not(A)) = 1 - P(A)$	F	TEST 50%		**85%**
Week 10 22/9 – 26/9 (4 days)	**Finance and growth**	1.Use the simple and compound growth formulae $A = P(1 + in)$ and $A = P(1 + i)^n$ to solve problems, including interest, hire purchase,				**88%**

2025 Mathematics   ATP Grade 10

Week 11 29/9 – 3/10 (5 days)	Finance and growth	1. Use the simple and compound growth formulae $A = P(1+in)$ and $A = P(1+i)^n$] to solve problems, including interest, **inflation, population growth and other real-life problems. Understand the implication of fluctuating foreign exchange rates (e.g. on the petrol price, imports , exports , overseas travel)**				**91%**

END OF TERM 3 SCHOOLS CLOSES ON 03/10/2025

DATE	TOPIC	CONTENT	F	ASSESSMENT	Date Completed	% Completed
TERM 4				**1 TASK FOR TERM 4**		
Week 1 13/10 – 17/10 (5 days)	**Measurement**	1.Revise the volume and surface area of right-prisms and cylinders. 2. Study the effect on volume and surface area when multiplying any dimension by a constant factor k.				**94%**
Week 2 20/10 – 24/10 (5 days)	**Measurement**	3. Calculate the volume and surface area of spheres, right pyramids, right cones, and combination of those objects (figures).	F	TEST		**97%**
Week 3 27/10 – 31/10 (5 days)	**Number Patterns**	Patterns: Investigate number patterns leading to those where there is a constant difference between consecutive terms, and the general term (without using a formula- see content overview) is therefore linear.				**100%**
Week 4 3/11 – 7/11 (5 days)	**Revision of Algebra**	**Revision of Algebra**				
Week 5 10/11 – 14/11	**Revision Trigonometry & Euclidean Geometry**	**Revision Trigonometry & Euclidean Geometry**				
Week 6 17/11 – 21/11	**FINAL EXAMINATIONS**					
Week 7 24/11 – 28/11	**FINAL EXAMINATIONS**					
Week 8 1/12 – 5/12 (5 days)	**FINAL EXAMINATIONS**					
08/12 – 12/12	**REPORTING**					

END OF TERM 4 SCHOOLS CLOSES …10/ 12 / 2025 : END OF YEAR

> **note:**
> • Modelling as a process should be included in all papers, thus contextual questions can be set on any topic.
> • Questions will not necessarily be compartmentalised in sections, as this table indicates. Various topics can be integrated in the same question.

Mark distribution for Mathematics NCS end-of-year papers: Grades 10-12			
Paper 1: Grades 12: bookwork: maximum 6 marks			
description	Grade 10	Grade 11	Grade. 12
Algebra and equations (and inequalities)	30 ± 3	45 ± 3	25 ± 3
Patterns and sequences	15 ± 3	25 ± 3	25 ± 3
Finance and growth	10 ± 3		
Finance, growth and decay		15 ± 3	15 ± 3
Functions and graphs	30 ± 3	45 ± 3	35 ± 3
Differential Calculus			35 ± 3
Probability	15 ± 3	20 ± 3	15 ± 3
Total	**100**	**150**	**150**
Paper 2: Grades 11 and 12: theorems and/or trigonometric proofs: maximum 12 marks			
description	Grade 10	Grade 11	Grade 12
Statistics	15 ± 3	20 ± 3	20 ± 3
Analytical Geometry	15 ± 3	30 ± 3	40 ± 3
Trigonometry	40 ± 3	50 ± 3	50 ± 3
Euclidean Geometry and Measurement	30 ± 3	50 ± 3	40 ± 3
Total	**100**	**150**	**150**

NB:

7 SBA TASKS TO BE COMPLETED IN 2025 YEAR END.

MATHEMATICS GRADE 11							
Task Number (SBA)	7 (Seven)						
Term	**Term1**		**Term 2**		**Term 3**		**Term 4**
Task Name	Project/ Investigation	Test	Assignment	June Exam	Test	Test	Test
Mark allocation indicate if fixed or suggested	Suggested Minimum Marks 50	Suggested Minimum Marks 50	Suggested Minimum Marks 50	Suggested Minimum Marks 150	Suggested Minimum Marks 50	Suggested Minimum Marks 50	Suggested Minimum Marks 50
Weighting	**15%**	**14%**	**15%**	**14%**	**14%**	**14%**	**14%**