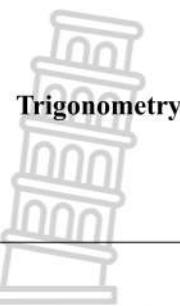
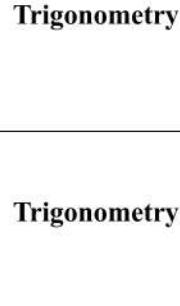
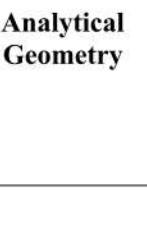
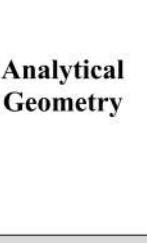




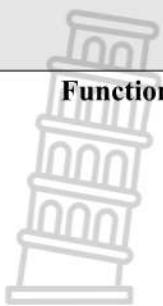
**GAUTENG PROVINCE**  
**MATHEMATICS – ANNUAL TEACHING PLAN –GRADE 11**  
**GRADE 11 ATP 2026**

DATE	TOPIC	CONTENT	FORMAL (F)	ASSESSMENT	DATE COMPLETED	% COMPLETED
<b>TERM 1</b>				<b>2 TASKS FOR TERM 1</b>		
<b>Week 1</b> 14/1 -16/1 (3 days)	<b>Exponents and Surds</b>	<ul style="list-style-type: none"> <li>▪ Simplify expressions and solve equations using the laws of exponents for rational exponents where, <math>x^{\frac{p}{q}} = \sqrt[q]{x^p}</math> ; <math>x &gt; 0</math> ; <math>q &gt; 0</math></li> <li>▪ Add, subtract, multiply and divide simple surds</li> <li>▪ Solve simple equations involving surds.</li> </ul>				<b>3%</b>
<b>Week 2</b> 19/1 – 23/1 (5 Days)	<b>Exponents and Surds</b>	<ul style="list-style-type: none"> <li>▪ Solve Quadratic equations by factorization</li> <li>▪ Complete the square</li> </ul>	<b>FORMAL TASK</b>	<b>Investigation / Project Weighting: 25%</b>		<b>6%</b>
<b>Week 3</b> 26/1 – 30/1 (5 Days)	<b>Equations and inequalities</b>	<ul style="list-style-type: none"> <li>▪ Solve Quadratic equations by using the quadratic formula</li> <li>▪ Solve Quadratic inequalities in one unknown (Interpret solutions graphically.)</li> </ul>				<b>9%</b>
<b>Week 4</b> 2/2 – 6/2 (5 Days)	<b>Equations and inequalities</b>	<ul style="list-style-type: none"> <li>▪ Equations in two unknowns, one of which is linear and the other quadratic.</li> </ul> <p><b>NB:</b> It is recommended that the solving of equations in two unknowns is important to be used in other equations like hyperbola-straight line as this is normal in the case of graphs</p>				<b>12%</b>
<b>Week 5</b> 9/2 – 13/2 (5 Days)	<b>Equations and inequalities</b>	<ul style="list-style-type: none"> <li>▪ Nature of roots Determine the nature of roots and the conditions for which the roots are Real, Non-Real , equal , unequal , Rational and Irrational</li> </ul>				<b>15%</b>
<b>Week 6</b> 16/2 –20/2 (5 Days)	<b>Trigonometry</b>	<p>Revise definitions of trig ratios using a unit circle: <b>(1 day)</b></p> <ol style="list-style-type: none"> <li>1. Derive and use the identities: <math>\sin \theta</math></li> </ol> $\tan \theta = \frac{\sin \theta}{\cos \theta}, \theta \neq k \cdot 90^\circ, k \text{ an odd integer; and}$ $\sin^2 \theta + \cos^2 \theta = 1.$				<b>18%</b>

Week 7 23/2 – 27/2 (5 Days)	 <b>Trigonometry</b>	2. Derive and use reduction formulae to simplify the following expressions: 2.1 $\sin(90^\circ \pm \theta)$ ; $\cos(90^\circ \pm \theta)$ ; 2.2 $\sin(180^\circ \pm \theta)$ ; $\cos(180^\circ \pm \theta)$ and $\tan(180^\circ \pm \theta)$ ; 2.3 $\sin(360^\circ \pm \theta)$ ; $\cos(360^\circ \pm \theta)$ and $\tan(360^\circ \pm \theta)$ ; 2.3 $\sin(-\theta)$ ; $\cos(-\theta)$ and $\tan(-\theta)$ ;				21%
Week 8 2/3 – 6/3 (5 Days)	 <b>Trigonometry</b>	3. Determine for which values of a variable an identity holds. 4. Determine the general solutions of trigonometric equations. Also, determine solutions in specific intervals.				24%
Week 9 9/3 – 13/3 (5 Days)	 <b>Trigonometry</b>	4. Determine the general solutions of trigonometric equations. Also, determine solutions in specific intervals.	<b>FORMAL TASK</b>	<b>Test SBA: Weighting: 75%</b>		26%
Week 10 16/3 – 20/3 (5 days)	 <b>Analytical Geometry</b>	1. Revise, <ul style="list-style-type: none"><li>• distance between the two points;</li><li>• gradient of the line segment connecting the two points (and from that identify parallel and perpendicular lines); and</li><li>• Coordinates of the mid-point of the line segment joining the two points.</li></ul>				29%
Week 11 23/3 – 27/3 (5 Days)	 <b>Analytical Geometry</b>	2. Derive and apply, <ul style="list-style-type: none"><li>• the equation of a line through two given points.</li><li>• the equation of a line through one point and parallel or perpendicular to a given line; and</li><li>• The inclination of (<math>\theta</math>) of a line, where <math>m = \tan\theta</math> is the gradient of the line (<math>0^\circ \leq \theta \leq 180^\circ</math>).</li></ul>				32%

END OF TERM 1 SCHOOLS CLOSES ON 27/03/2026

DATE	TOPIC	CONTENT	FORMAL (F)	ASSESSMENT	DATE COMPLETED	% COMPLETED
TERM 2		2 TASKS FOR TERM 2				
Week 1 8/4 – 10/4 (3 days)	Euclidean Geometry	<p>1. Accept results established in earlier grades as axioms and, also that a tangent to a circle is perpendicular to the radius drawn to the point of contact.</p>				35%
Week 2 13/4 – 17/4 (5 days)	Euclidean Geometry	<p>2. Then investigate and prove the theorems of the geometry of circles:</p> <ul style="list-style-type: none"> <li>• The line drawn from the centre of a circle perpendicular to a chord bisects the chord.</li> <li>• The line drawn from the centre of a circle to the midpoint of a chord is perpendicular to the chord.</li> <li>• The perpendicular bisector of a chord passes through the centre of the circle.</li> <li>• The angle subtended by an arc at the centre of a circle is double the size of the angle subtended by the same arc at the circle (on the same side of the chord as the centre).</li> </ul>				38%
Week 3 20/4 – 24/4 (5 days)	Euclidean Geometry	<ul style="list-style-type: none"> <li>• Angles subtended by a chord of the circle, on the same side of the chord, are equal.</li> <li>• The opposite angles of a cyclic quadrilateral are supplementary.</li> <li>• An exterior angle of a cyclic quadrilateral is equal to an angle in the alternate segment.</li> </ul>				41%
27 April	Freedom Day Observed					
Week 4 28/4 – 30/4 (3 days)	Euclidean Geometry	<ul style="list-style-type: none"> <li>• Two tangents drawn to a circle from the same point outside the circle are equal in length.</li> <li>• The angle between the tangent to a circle and the chord drawn from the point of contact is equal to the angle in the alternate segment.</li> </ul> <p><b>Use the above theorems and their converses, where they exist, to solve riders.</b></p>	FORMAL TASK	ASSIGNMENT Weighting :25%		44%

1 May	Workers Day					
<b>Week 5</b> 4/5 – 8/5 (5 days)	 <b>Functions</b>	<p>1. Revise the effect of the parameters <math>a</math> and <math>q</math> and investigate the effect of <math>p</math> on the graphs of the functions defined by:</p> <ul style="list-style-type: none"> <li><math>y = f(x) = a(x + p) + q</math></li> <li><math>y = f(x) = a(x + p)^2 + q</math></li> </ul>				47%
<b>Week 6</b> 11/5 – 15/5 (5 days)	<b>Functions</b>	<ul style="list-style-type: none"> <li>Revise the effect of the parameters <math>a</math> and <math>q</math> and investigate the effect of <math>p</math> on the graphs of the functions defined by:</li> <li><math>y = f(x) = \frac{a}{x+p} + q</math></li> </ul>				50%
<b>Week 7</b> 18/5 – 22/5 (5 days)	<b>Functions</b>	<ul style="list-style-type: none"> <li>Revise the effect of the parameters <math>a</math> and <math>q</math> and investigate the effect of <math>p</math> on the graphs of the functions defined by: <math>y = f(x) = a \cdot b^{x+p} + q</math> where <math>b &gt; 0</math> <math>b \neq 1</math></li> </ul>				53%
<b>Week 8</b> 25/5 – 29/5 (5 days)	<b>Functions</b>	<ul style="list-style-type: none"> <li>Investigate numerically the average gradient between two points on a curve and develop an intuitive understanding of the concept of the gradient of a curve at a point.</li> </ul>				56%
<b>Week 9</b> 1/6 – 5/6 (5 days)	<b>Trigonometry Functions</b>	<ul style="list-style-type: none"> <li>Point by point plotting of basic graphs defined by <math>y = \sin \theta</math> , <math>y = \cos \theta</math> and <math>y = \tan \theta</math> for <math>\theta \in [-360^\circ; 360^\circ]</math>.</li> <li>Investigate the effect of the parameter <math>k</math> on the graphs of the functions defined by, <math>y = \sin (kx)</math> , <math>y = \cos (kx)</math> and <math>y = \tan (kx)</math></li> </ul>				59%
15 June 16 June	Special School Holiday Youth Day					
<b>Week 10</b> 8/6 – 12/6 (5 days)	<b>JUNE EXAMINATION</b>	<b>JUNE EXAMINATION</b>	<b>FORMAL</b>	<b>JUNE EXAMINATION</b>		
<b>Week 11</b> 17/6 – 19/6 (3 days)	<b>JUNE EXAMINATION</b>	<b>JUNE EXAMINATION</b>		<b>Paper 1 :100</b> <b>Paper 2:100</b>  <b>Weighting :</b> <b>75%</b>		

Week 12 22/6-26/6 (5 days)	JUNE EXAMINATION	JUNE EXAMINATION		
END OF TERM 2 SCHOOLS CLOSES ON 26/06/2026				



DATE	TOPIC	CONTENT	FORMAL (F)	ASSESSMENT	DATE COMPLETED	% COMPLETED
TERM 3				2 TASKS FOR TERM 3		
Week 1 21/7–24/7 (4 days)	Trigonometry Functions	<ul style="list-style-type: none"> <li>Investigate the effect of the parameter <math>p</math> on the graphs of the functions defined by, <math>y = \sin(x + p)</math>, <math>y = \cos(x + p)</math> and <math>y = \tan(x + p)</math></li> </ul>				62%
Week 2 27/7–31/7 (5 days)	Trigonometry Functions	<ul style="list-style-type: none"> <li>Draw sketch graphs defined by: <math>y = a \sin k(x + p)</math>, <math>y = a \cos k(x + p)</math> and <math>y = a \tan k(x + p)</math> at most two parameters at a time.</li> </ul>				65%
Week 3 3/8–7/8 (5 days)	Trigonometry (2D)	<ul style="list-style-type: none"> <li>Prove and apply the sine, cosine and area rules</li> <li>Solve problems in two dimensions using the sine, cosine and area rules.</li> </ul>	FORMAL TASK	TEST 1 Weighting :50%		68%
10/8		<b>Public Holiday</b>				
Week 4 11/8–14/8 (4 days)	Trigonometry (2D)	<ul style="list-style-type: none"> <li>Solve problems in two dimensions using the sine, cosine and area rules.</li> </ul>				71%
Week 5 17/8–21/8 (5 days)	Statistics	<ul style="list-style-type: none"> <li>Revise measures of central tendency and dispersion in ungrouped and grouped data.</li> <li>Revise Five number summary (maximum, minimum and quartiles) and box and whisker diagram.</li> <li>Histograms Frequency polygons</li> </ul>				74%

<b>Week 6</b> 24/8 –28/8 <b>(5 days)</b>	 <b>Statistics</b>	<ul style="list-style-type: none"> <li>• Ogives (cumulative frequency curves)</li> <li>• Variance and standard deviation of ungrouped data</li> <li>• Symmetric and skewed data</li> </ul> <p>Identification of outliers.</p>				<b>76%</b>
<b>Week 7</b> 31/8 – 4/9 <b>(5 days)</b>	 <b>Probability</b>	<ul style="list-style-type: none"> <li>• Revise the use of probability models to compare the relative frequency of events with the theoretical probability.</li> <li>• Revise the use of Venn diagrams to solve probability problems, deriving and applying the following for any two events in a sample space S: <ul style="list-style-type: none"> <li><b>Addition rule</b>  <math>P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)</math>;</li> <li><b>A and B are Mutually exclusive</b> if <math>P(A \text{ and } B) = 0</math>;</li> <li>Addition rule for mutually exclusive events A and B is: <math>P(A \text{ or } B) = P(A) + P(B)</math> <ul style="list-style-type: none"> <li>▪ A and B are complementary if they are, mutually exclusive and <math>P(A) + P(B) = 1</math>  Then</li> <li>• <math>P(B) = P(\text{not } A) = 1 - P(A)</math></li> </ul> </li> </ul> </li> </ul>				<b>79%</b>
<b>Week 8</b> 7/9 – 11/9 <b>(5 days)</b>	<b>Probability</b>	<ul style="list-style-type: none"> <li>▪ Identify dependent and independent events and the product rule for independent events:  <math>P(A \text{ and } B) = P(A) \times P(B)</math></li> <li>• The use of Venn diagrams to solve probability problems, deriving and applying formulae for any three events A, B and C in a sample space S.</li> </ul>	<b>FORMAL TASK</b>	<b>TEST Weighting : 50%</b>		<b>82%</b>

Week 9 14/9 – 18/9 (5 days)		<ul style="list-style-type: none"> <li>Use tree diagrams for the probability of consecutive or simultaneous events which are not necessarily independent.</li> <li>Use contingency tables to solve probability problems for three events in a sample space</li> </ul>					85%
Week 10 21/9 – 23/9 (3 days)	<b>Number Patterns</b>	<ul style="list-style-type: none"> <li>Revise linear number patterns. (2 days)</li> <li>Investigate number patterns leading to those where there is a constant second difference between consecutive terms, and the general term is therefore quadratic.</li> </ul>					94%
24/9  25/9			<b>Heritage Day</b>		<b>School Holiday</b>		
<b>END OF TERM 3 SCHOOLS CLOSES ON 23/09/2026</b>							

DATE	TOPIC	CONTENT	FORMAL (F)	ASSESSMENT	DATE COMPLETED	% Completed
<b>TERM 4</b>			<b>1 TASK FOR TERM 4</b>			
<b>Week 1</b> 6/10 – 9/10 <b>(4 days)</b>	 <b>Number Patterns</b>	Investigate number patterns leading to those where there is a constant second difference between consecutive terms, and the general term is therefore quadratic				<b>97%</b>
<b>Week 2</b> 12/10 – 16/10 <b>(5 days)</b>	<b>Finance, growth and decay</b>	<ol style="list-style-type: none"> <li>Revise the use of the simple and compound growth formulae <math>[A = P(1 + in)</math> and <math>A = P(1 + i)^n</math>] to solve problems, including interest, hire purchase, inflation, population growth and other real-life problems.</li> <li>Understand the implication of fluctuating foreign exchange rates (e.g., on the petrol price, imports, exports, overseas travel).</li> </ol>	<b>FORMAL TASK</b>	<b>TEST</b>		<b>88%</b>
<b>Week 3</b> 19/10 – 23/10 <b>(5 days)</b>	<b>Finance, growth and decay</b>	<ol style="list-style-type: none"> <li>Use simple and compound decay formulae: <math>A = P(1 - in)</math> and <math>A = P(1 - i)^n</math> To solve problems (including straight line depreciation and depreciation on a reducing balance).</li> <li>The effect of different periods of compound growth and decay, including nominal and effective interest rates</li> </ol>				<b>91%</b>
<b>Week 4</b> 26/10 – 30/10 <b>(5 days)</b>	<b>Revision Measurement</b>	<ul style="list-style-type: none"> <li>Revise the volume and surface areas of right-prisms and cylinders.</li> <li>Study the effect on volume and surface areas when multiplying any dimension by a constant factor <math>k</math>.</li> </ul> <ol style="list-style-type: none"> <li>Calculate volume and surface areas of spheres, right prisms, right cones and combination of those objects (figures).</li> </ol>				<b>100%</b>

<b>Week 5</b> 2/11 – 6/11 <b>(5 days)</b>	Revision Euclidean Geometry					
<b>Week 6</b> 9/11 – 13/11 <b>(5 days)</b>	<b>FINAL EXAMINATION</b>					<b>Final Exam Weighting 75%</b>
<b>Week 7</b> 16/11 – 20/11 <b>(5 days)</b>	<b>FINAL EXAMINATIONS</b>					
<b>Week 8</b> 23/11 – 27/11 <b>(5 days)</b>	<b>FINAL EXAMINATIONS</b>					
<b>Week 9</b> 31/11 – 4/12 <b>(5 days)</b>	<b>FINAL EXAMINATIONS</b>					
<b>Week 10</b> 7/12-11/12 <b>(5 days)</b>	<b>REPORTING</b>					
<b>END OF TERM 4 SCHOOLS CLOSES 11/ 12 / 2026 : END OF YEAR</b>						

## 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)	$30 \pm 3$	$45 \pm 3$	$25 \pm 3$
Patterns and sequences	$15 \pm 3$	$25 \pm 3$	$25 \pm 3$
Finance and growth	$10 \pm 3$		
Finance, growth and decay		$15 \pm 3$	$15 \pm 3$
Functions and graphs	$30 \pm 3$	$45 \pm 3$	$35 \pm 3$
Differential Calculus			$35 \pm 3$
Probability	$15 \pm 3$	$20 \pm 3$	$15 \pm 3$
<b>Total</b>	<b>100</b>	<b>150</b>	<b>150</b>

Paper 2: Grades 11 and 12: theorems and/or trigonometric proofs: maximum 12 marks

description	Grade 10	Grade 11	Grade 12
Statistics	$15 \pm 3$	$20 \pm 3$	$20 \pm 3$
Analytical Geometry	$15 \pm 3$	$30 \pm 3$	$40 \pm 3$
Trigonometry	$40 \pm 3$	$50 \pm 3$	$50 \pm 3$
Euclidean Geometry and Measurement	$30 \pm 3$	$50 \pm 3$	$40 \pm 3$
<b>Total</b>	<b>100</b>	<b>150</b>	<b>150</b>

**NB:****7 SBA TASKS TO BE COMPLETED IN 2026 YEAR END**


MATHEMATICS GRADE 11							
Task Number (SBA)	7 (Seven)						
Term	Term 1		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 50 <b>100 PER PAPER</b>	Suggested Minimum Marks 50	Suggested Minimum Marks 50	Suggested Minimum Marks 50
Weighting for end of year	15%	14%	15%	14%	14%	14%	14%
Weighting per term reporting	25%	75%	25%	75%	50%	50%	<b>SBA = 40% Final Exam = 60%</b>