KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

MATHEMATICS ANNUAL TEACHING PLAN GRADE 11 – 2026

NAME OF SCHOOL: ……

NAME OF TEACHER: ……

TERM 1									
NUMBER OF DAYS	DATE STARTED	DATE COMPLETED	TOPIC	CURRICULUM STATEMENT	ASSESSMENT	F/IF	DH: SIGNATURE and DATE	% COMPLETED	
								Term	Year
14/01 – 19/01 (4 days)			EXPONENTS AND SURDS	1. Simplify expressions using the laws of exponents for rational exponents where $x^{\frac{p}{q}} = \sqrt[q]{x^p}; x > 0; q > 0$ 2. Solve equations using the laws of exponents for rational exponents where $x^{\frac{p}{q}} = \sqrt[q]{x^p}; x > 0; q > 0$				9	3
20/01 – 21/01 (2 days)				3. Add, Subtract, Multiply and Divide Simple Surds.				14	5
22/01 – 23/01 (2 days)				4. Solve simple equations involving surds.				19	6
26/01 – 03/02 (7 days)			EQUATIONS	1. Revision of factorisation. 2. Quadratic equations (by factorisation). 3. Complete the square. 4. Quadratic equations (by using the quadratic formula).				35	12
04/02 – 09/02 (4 days)			INEQUALITIES	Quadratic inequalities in one unknown (interpret solutions graphically).				44	15
10/02 – 13/02 (4 days)			SIMULTA-NEOUS EQUATIONS	Equations in two unknowns, one of which is linear and the other quadratic. **NB: To apply this skill also in other contexts, e.g. to determine the points of intersection of a straight line and a hyperbola**				53	18
16/02 – 18/02 (3 days)			NATURE OF ROOTS	Nature of roots.	**INVESTI-GATION SBA Weighting: 15**	**F**		60	21

TERM 1 (continued)									
NUMBER OF DAYS	**DATE STARTED**	**DATE COMPLETED**	**TOPIC**	**CURRICULUM STATEMENT**	**ASSESSMENT**	**F/IF**	**DH: SIGNATURE and DATE**	**% COMPLETED**	
								Term	**Year**
19/02 – 06/03 (12 days)			**TRIGONOMETRIC IDENTITIES and REDUCTION FORMULAE**	1. Derive and use the identities: • $\tan\theta = \frac{\sin\theta}{\cos\theta}; k \neq k.90°$, k an odd integer • $\sin^2\theta + \cos^2\theta = 1$ 2. Derive and use reduction formulae to simplify the following expressions: • $\sin(90° \pm \theta); \cos(90° \pm \theta)$ • $\sin(180° \pm \theta); \cos(180° \pm \theta); \tan(180° \pm \theta)$ • $\sin(360° \pm \theta); \cos(360° \pm \theta); \tan(360° \pm \theta)$ and • $\sin(-\theta); \cos(-\theta); \tan(-\theta)$. 3. Proving trigonometric identities 4. Determine for which values of a variable an identity holds.				88	30
09/03 – 13/03 (5 days)			**TRIG EQUATIONS and GENERAL SOLUTIONS**	Determine general solutions of trigonometric equations. Also, determine solutions in specific (given) intervals.				100	34
16/03 – 20/03 (5 days)			**REVISION and MARCH TEST**	**MARCH TEST to cover the work done during Term 1.**	**MARCH TEST SBA Weighting: 14**	**F**			

TERM 2

NUMBER OF DAYS	DATE STARTED	DATE COMPLETED	TOPIC	CURRICULUM STATEMENT	ASSESSMENT	F/IF	HOD: SIGNATURE and DATE	% COMPLETED	
								Term	Year
08/04 – 13/04 (4 days)			**EUCLIDEAN GEOMETRY**	1. Accept results established in earlier grades as axioms and that **a tangent to a circle is perpendicular to the radius, drawn to the point of contact.** 2. Investigate and prove the following theorems of the geometry of circles, assuming results from earlier grades: • **The line drawn from the centre of a circle perpendicular to a chord bisects the chord** • **The line drawn from the centre of a circle that bisects a chord is perpendicular to the chord** • The perpendicular bisector of a chord passes through the centre of the circle. • **The angle at the centre of a circle is double the size of the angle at the circle** • Angles subtended by a chord of the circle, on the same side of the chord, are equal.				10	37
14/04 – 17/04 (4 days)				3. Investigate and prove the following theorems of the geometry of circles: • **The opposite angles of a cyclic quadrilateral are supplementary**. • Two tangents drawn to a circle from the same point outside the circle are equal in length. • **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.**				19	40
20/04 – 23/04 (4 days)				4. Use the above theorems and their converses, where they exist, to solve circle geometry problems and prove riders. **The proofs of the FIVE theorems printed in bold above can be asked in examinations.** (See 2021 Gr. 12 Examination Guidelines, page 7.)				29	44
24/04 – 28/04 (2 days)			**ANALYTICAL GEOMETRY**	1. Revise: • Distance between the two points • Gradient of the line segment connecting the two points (and from that identify parallel lines); and • Coordinate of the midpoint of the line segment joining two points.				33	45

TERM 2 (continued)

NUMBER OF DAYS	DATE STARTED	DATE COMPLETED	TOPIC	CURRICULUM STATEMENT	ASSESSMENT	F/IF	HOD: SIGNATURE and DATE	% COMPLETED	
								Term	Year
29/04 – 11/05 (8 days)			**ANALYTICAL GEOMETRY**	2. Derive and apply the **equation of a line** through: • two given points. • one point and parallel or perpendicular to a given line. • Collinear points. 3. The inclination (θ) of a given line, where $m = \tan\theta$ is the gradient of the line $(0° \le \theta \le 180°)$.				52	52
12/05 – 15/05 (4 days)			**FUNCTIONS**	1. Revise the effect of the parameters a and q and investigate the effect of p on the graph of the function defined by $y = f(x) = a(x+p)^2 + q$				62	55
18/05 – 20/05 (3 days)				2. Revise the effect of the parameters a and q and investigate the effect of p on the graph of the function defined by $y = f(x) = \frac{a}{x+p} + q$				69	57
21/05 – 25/05 (3 days)			**FUNCTIONS**	3. Revise the effect of the parameters a and q and investigate the effect of p on the graph of the function defined by $y = f(x) = a.b^{x+p} + q$, where $b > 0$ and $b \ne 1$.	**ASSIGNMENT** **SBA Weighting: 15**	**F**		76	60
26/05 – 28/05 (3 days)				4. Investigate numerically the average gradient between two points on a curve. 5. Develop an intuitive understanding of the concept of the gradient of a curve at a point. 6. Interpretation, application and practical problems. **NB: Integration between Nature of roots and Functions.**				83	62
29/05 – 08/06 (7 days)			**TRIGONO-METRIC FUNCTIONS**	7. Investigate the effect of the parameter k on the graphs of the functions defined by, $y = \sin(kx)$, $y = \cos(kx)$ and $y = \tan(kx)$ 8. Investigate the effect of the parameter p on the graphs of the functions defined by, $y = \sin(x+p)$, $y = \cos(x+p)$ and $y = \tan(x+p)$ 9. Draw sketch graphs defined by: $y = a\sin k(x+p)$, $y = a\cos k(x+p)$ and $y = a\tan k(x+p)$ at most two parameters at a time				100	67
09/06 – 12/06 (4 days)			**REVISION and JUNE EXAM**	**JUNE TEST to cover the work done during Term 2, excluding graphs of trigonometric functions.**	**JUNE EXAM** **SBA Weighting: 14**	**F**			

TERM 3									
NUMBER OF DAYS	**DATE STARTED**	**DATE COMPLETED**	**TOPIC**	**CURRICULUM STATEMENT**	**ASSESSMENT**	**F/IF**	**DH: SIGNATURE and DATE**	**% COMPLETED**	
								Term	**Year**
21/07 – 24/07 (4 days)			**TRIGONOMETRY**	1. Prove and apply the: sine rule, cosine rule and area rule.				10	71
27/07 – 30/07 (4 days)				2. Solve problems in two dimensions using the sine, cosine and area rules.				20	74
31/07 – 13/08 (9 days)			**STATISTICS**	1. Revise Grade 10 statistics 2. Histograms • Frequency polygons • Variance and standard deviation of ungrouped data • Ogives (cumulative frequency curves). • Symmetric and skewed data. • Identification of outliers	**TERM 3 TEST SBA Weighting: 14**	**F**		37	79
14/08 – 26/08 (9 days)			**PROBABILITY**	1. Revise Grade 10 Probability. 2. Identify dependent and independent events and the product rule for independent events: $P(A \text{ and } B) = P(A) \times P(B)$ 3. The use of Venn diagrams to solve probability problems, 4. deriving and applying formulae for any three events A, B and C in a sample space S. 5. Use tree diagrams for the probability of consecutive or simultaneous events which are not necessarily independent. 6. Use contingency tables to solve probability problems.				56	86
27/08 – 07/09 (8 days)			**FINANCE, GROWTH AND DECAY**	1. Revise Grade 10 Finance and Growth 2. Use the simple and compound decay formulae, $A = P(1-ni)$ and $A = P(1-i)^n$, to solve problems (including straight line depreciation and depreciation on a reducing balance). 3. Different periods of compound growth and decay. Effective and nominal interest rates.				73	91

TERM 3 (continued)									
NUMBER OF DAYS	**DATE STARTED**	**DATE COMPLETED**	**TOPIC**	**CURRICULUM STATEMENT**	**ASSESSMENT**	**F/IF**	**DH: SIGNATURE and DATE**	**% COMPLETED**	
								Term	**Year**
08/09 – 10/09 (5 days)			**MEASUREMENT**	1. Revise the volume and surface areas of right-prisms and cylinders. 2. Study the effect on volume and surface areas when multiplying any dimension by a constant factor k. 3. Calculate volume and surface areas of spheres, right prisms, right cones and combination of those objects (figures).				100	95
11/09 – 21/09 (7 days)			**REVISION and SEPTEMBER TEST**	**SEPTEMBER TEST to cover graphs of trigonometric functions and the work done during Term 3, excluding measurement.**	**SEPTEMBER TEST SBA Weighting: 14**	**F**			

TERM 4									
NUMBER OF DAYS	**DATE STARTED**	**DATE COMPLETED**	**TOPIC**	**CURRICULUM STATEMENT**	**ASSESSMENT**	**F/IF**	**DH: SIGNATURE and DATE**	**% COMPLETED**	
								Term	**Year**
06/10 – 08/10 (3 days)			**NUMBER PATTERNS**	Revise linear number patterns				30	96
09/10 – 19/10 (7 days)				Investigate number patterns leading to those where there is a constant second difference between consecutive terms, and the general term is therefore quadratic.	**TERM 4 TEST SBA Weighting: 14**	**F**		100	100
20/10 – 26/10 (5 days)			**REVISION OF ALGEBRA & FUNCTIONS**	Revision					
27/10 – 02/11 (5 days)			**REVISION OF TRIGONOMETRY & EUCLIDEAN GEOMETRY**	Revision					
03/11 – 09/12 (27 days)			**REVISION and NOVEMBER EXAM**	**NOVEMBER EXAMINATION:** **PAPER 1: 150 MARKS (Algebra, Functions, Number Pattern, Finance and Probability)** **PAPER 2: 150 MARKS (Statistics, Analytical Geometry, Trigonometry, Euclidean Geometry and Measurement)**	**NOVEMBER EXAMINATION**	**F**			