MATHEMATICS

GRADE 12 TERM 1

Tracker

Topic 1: Patterns, Sequences and Series										
CAPS Concepts and Activities	Time (Hrs)	CAPS Page no.	Year:				Year:			
			Class				Class			
			Date Completed				Date Completed			
Lesson 1										
Topic: Patterns, Sequences and Series • Revision 　o Linear patters 　o Quadratic patterns	1	40								
Lesson 2										
Topic: Patterns, Sequences and Series • Arithmetic sequences 　o Recognise an arithmetic sequence 　o Find the general term of an arithmetic sequence 　o Answer other questions based on the arithmetic sequence such as position of a term and a finding a term in a given position	1	40								
Lesson 3										
Topic: Patterns, Sequences and Series • Geometric sequences 　o Recognise a geometric sequence 　o Find the general term of an geometric sequence 　o Answer other questions based on the geometric sequence such as position of a term and a finding a term in a given position	2	40								
Lesson 4										
Topic: Patterns, Sequences and Series • Sum of arithmetic sequences 　o Find the sum of an arithmetic sequence 　o Derive the formula for finding the sum of an arithmetic sequence	2	40								

Lesson 5											

Topic: Patterns, Sequences and Series
• Sum of geometric sequences
   o Find the sum of a geometric sequence
   o Derive the formula for finding the sum of a geometric sequence
	2	40									

Lesson 6											

Topic: Patterns, Sequences and Series
• Sigma notation
   o Find the sum of a series when given the sigma notation
   o Write a series in sigma notation
	1	40									

Lesson 7											

Topic: Patterns, Sequences and Series
• Sum to infinity
   o Explain the difference between a diverging and converging geometric series
   o Find the sum to infinity of a converging geometric series
	2	40									

Lesson 8											
Topic: Patterns, Sequences and Series • Revision and consolidation	1,5	40									
Lesson 9											
Topic: Patterns, Sequences and Series • Assignment	1	40									

Reflection

Think about and make a note of: What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you cover all the work set for the week? If not, how will you get back on track?	What will you change next time? Why?	
	HOD:	Date:

Topic 2: Functions: Formal Definition; Inverses; Exponential and Logarithmic											
CAPS Concepts and Activities	Time (Hrs)	CAPS Page no.	Year:				Year:				
			Class				Class				
			Date Completed				Date Completed				
Lesson 1											

Topic: Functions
• Revision
  o Revise finctions from previous years
  o Define and recognise functions
	2,5	40, 41									

Lesson 2											
Topic: Functions • Investigation	1	40, 41									
Lesson 3											

Topic: Functions
• Inverse functions and their graphs
  o Explain what an inverse function is
  o Find the equation of an inverse function
  o Restrict the domain of a quadratic function to make the inverse a function
	4	40, 41									

Lesson 4											

Topic: Functions
• Revision of exponential laws and exponential functions
  o Exponential laws and definitions
  o Exponential functions
	3	40, 41									

Lesson 5											

Topic: Functions
• Logarithms
  o Define a logarithm
  o Use logarithmic laws in simple form
	2,5	40, 41									

Lesson 6											

Topic: Functions
• Logarithmic functions
  o Recognise and sketch logarithmic functions
  o Answer questions related to logarithmic functions
	2	40, 41									

Lesson 7										
Topic: Functions • Revision and consolidation	2	40, 41								

Reflection	
Think about and make a note of: What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you cover all the work set for the week? If not, how will you get back on track?	What will you change next time? Why?
	HOD: Date:

Topic 3: Finance, Growth and Decay									
CAPS Concepts and Activities	Time (Hrs)	CAPS Page no.	Year:			Year:			
			Class			Class			
			Date Completed			Date Completed			
Lesson 1									

Topic: Finance, Growth and Decay
• Revision of:
  o Nominal and effective interest rates
  o Depreciation
  o Different Compounding periods
	1	42							

Lesson 2									

Topic: Finance, Growth and Decay
• Future Value Annuities
  o Calculating the future value of an annuity
  o Calculating the monthly payment of an annuity
	2.5	42							

Lesson 3									

Topic: Finance, Growth and Decay
• Present Value annuities
  o Calculating the present value of an annuity
  o Calculating the monthly payment of an annuity
	2.5	42							

Lesson 4									

Topic: Finance, Growth and Decay
• Time periods of annuities
  o Calculating the time period of an annuity
  o Calculating the final instalment of a present value annuity
	1.5	42							

Lesson 5									
Topic: Finance, Growth and Decay • Analysing investments and loans • Pyramid schemes	0.5	42							

Lesson 6											
Topic: Finance, Growth and Decay • Revision and Consolidation	1	42									

Reflection	
Think about and make a note of: What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you cover all the work set for the week? If not, how will you get back on track?	What will you change next time? Why?
	HOD: Date:

Topic 4: Trigonometry											
CAPS Concepts and Activities	Time (Hrs)	CAPS Page no.	Year:					Year:			
			Class					Class			
			Date Completed					Date Completed			
Lesson 1											
Topic: Trigonometry • Revision ○ Grade 11 Trigonometry	2	42									
Lesson 2											
Topic: Trigonometry • Investigation ○ Investigation on compound angles and double angles	1	42									
Lesson 3											

Topic: Trigonometry
• Compound angles and double angles
  ○ Recognise compound angles and double angles
  ○ Expand and simplify compound angles and double angles
	2	42									

Lesson 4											

Topic: Trigonometry
• Derivation and application of compound angles and double angles formulae
  ○ Derive the compound angles and double angles formulae
  ○ Apply the compound angles and double angles formulae
	1	42									

Lesson 5											
Topic: Trigonometry • General solutions ○ Find general solutions involving compound angles and double angles and factorising	1	42									
Lesson 6											
Topic: Trigonometry • Identities ○ Prove identities involving compound angles and double angles	1	42									

o Find the values of an unknown that make an identity invalid											

Lesson 7											
Topic: Trigonometry • Revision and consolidation	1	42									

Term 1 Test											
Test • Complete the test	1	42									

Reflection	
Think about and make a note of: What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you cover all the work set for the week? If not, how will you get back on track?	What will you change next time? Why?
	HOD: Date: