

YEAR 12 MATHEMATICS B WORK PLAN: Semester 1, 2017 – Miss Morrison, Mr Miller-Metzner.



UNIT	TERM 1 TOPICS	ASSESSMENT	DUE DATE
1	Rates of Change 2. (4 weeks) Text Ref: Ch 1 EX 1C, 1D & Ch 2 EX 2A-2E Review concept of rate of change and derivative, Rules for differentiation Evaluation of the derivative of a function at a point, Interpretation of the derivative as an instantaneous rate of change, Interpretation of the derivative as the gradient function. Maximum and minimum problems, Practical applications of instantaneous rate of change.	Exam 3.1a Unit 1 (90 mins)	Week 6 Wed 1 st March Lesson 5 & 6
2	Periodic Functions and Applications 3. (2 Weeks) Text Ref: Ch 5 EX 5A-5D, 5F Review trigonometric functions (WP Ref 1.4; 2.2) Solution of simple trigonometric equations within a specified domain Pythagorean Identity $\sin^2x + \cos^2x = 1$ Applications of periodic functions		
3	Periodic functions and applications 4. (2 Weeks) Text Ref: Ch 6 EX 6A-6C Derivatives of functions involving $\sin x$ and $\cos x$ Applications of the derivatives of $\sin x$ and $\cos x$ in life related	Exam 3.1b Units 2 and 3 (90 mins)	Week 10 Wed 29 th March Lesson 5 & 6
UNIT	TERM 2 TOPICS	ASSESSMENT	DUE DATE
4	Introduction to Integration 1 and 2 (4 Weeks) Text Ref: Ch 7 EX 7A→7C and Ch.8 Ex. 8A→ 8E Definition of definite integral and relation to area under a curve Definition of indefinite integral Rules for integration Applications of integration	Assignment 3.2 Methods of Integration	Hand Out: Week 2 Thurs 27 th April Monitoring: Week 4 Thurs 11 th May Due: Week 6 Thurs 25 th May
5	Exponential and Logarithmic Functions and Applications 3 (4 Weeks) Text Ref: Ch 3 EX 3A→3G and Ch.4 Ex. 4B, 4C & 4E Review of index and log laws Derivatives of exponential and logarithmic functions for base e Applications of derivative of exponential functions	Exam 3.3a Unit 4 (90 mins) Exam 3.3b Unit 5 (90 mins)	Exam Block Exam Block

This work plan was last updated on Monday, 30 January 2017. The contents are subject to change – students will be advised in advance of any changes - regularly check for updates.