

## YEAR 12 MATHEMATICS B WORK PLAN: Semester 2, 2017 – Ms Morrison, Mr. Miller-Metzner



UNIT	TERM 3 TOPICS	ASSESSMENT	DUE DATE
4.1	<b>1) EXPONENTIAL AND LOGARITHMIC FUNCTIONS AND APPLICATION 4_– 4 weeks</b> (QMaths Text: 3.9, 3.10,8.4, 8.5, 8.6, 8.7, 8.8) <ul style="list-style-type: none"> <li>• Development of algebraic models from appropriate datasets using logarithms and/or exponents</li> <li>• Applications of geometric progressions to compound interest including past, present and future values</li> <li>• Applications of geometric progressions to effective interest rates</li> </ul>	Assignment 4.2	<b>Week 2:</b> Handout: Mon 17 <sup>th</sup> July <b>Week 4:</b> Monitoring: Mon 31 <sup>st</sup> July <b>Week 5:</b> Monitoring: Mon 7 <sup>th</sup> August <b>Week 6:</b> Due Date: Mon 14 <sup>th</sup> August
4.2	<b>2) OPTIMISATION USING DERIVATIVES 2 – 2 WEEKS</b> (Q Maths Text: Ex 11.3, 11.4 ) <ul style="list-style-type: none"> <li>• Recognition of the problem to be optimised (maximised or minimised)</li> <li>• Identification of variables and construction of the function to be optimised</li> <li>• Applications of the derivative to optimisation in life-related situations eg .business profit/cost</li> <li>• Interpretation of mathematical solutions and their communication in a form appropriate to the given problem</li> </ul>	Exam 4.1a (Topic 4.1) 90min	<b>Week 7</b> Tues 22 <sup>nd</sup> August Lessons 5 and 6
4.3	<b>3) INTRODUCTION TO INTEGRATION 3 - 2 weeks</b> (Text: Ex 8D & Q Maths Text :Ex 4.5, 4.6) <ul style="list-style-type: none"> <li>• Indefinite integrals of simple polynomial functions, simple exponential functions,</li> <li>• Use of integration to find area</li> <li>• Practical applications of the integral</li> </ul>	Exam 4.1b (Topic 4.2, 4.3) 90min	<b>Week 9/10</b> Exam Block TBC
UNIT	TERM 4 TOPICS	ASSESSMENT	DUE DATE
4.4	<b>4) APPLIED STATISTICAL ANALYSIS 3_</b> (Text: Ex 9A-9E & Ex 10A-10C) <ul style="list-style-type: none"> <li>• Use of relative frequencies to estimate probabilities; the notion of probabilities of individual values for discrete variables and intervals for continuous variables</li> <li>• Probability distribution and expected value for a discrete variable</li> <li>• Identification of the binomial situation and use technology for binomial probabilities</li> <li>• Concept of a probability distribution for a continuous random variable</li> <li>• The normal model and use of standard normal tables</li> </ul>	Exam 4.3 (Topic 4.4) 120min	<b>Week 6</b> Exam Block TBC

This work plan was last updated on Tuesday, 18 July 2017. The contents are subject to change – students will be advised in advance of any changes - regularly check for updates.