

YEAR 12 MATHEMATICS C WORK PLAN: Semester 2, 2017 – Ms Morrison



UNIT	TERM 3 TOPICS	ASSESSMENT	DUE DATE
18	<p>Calculus 4 – 2 Weeks (Ex. 5C – 5D, Ex. 4H – 4I, additional material) Life-related applications of simple, linear, first order differential equations with constant coefficients Investigate the motion of falling objects, where resistance is proportional to the velocity, by considering the differential equation</p> $m \frac{dv}{dt} = mg - kv$ <p>Volumes of revolution Approximation using Simpson's Rule</p>	Assignment 4.2	<p>Week 2: Handout: Thurs 20th July Week 5: Monitoring:, Fri 11th August Week 7: Due Date: Fri 25th August (including in-class task under exam conditions)</p>
19	<p>Dynamics – 2 Weeks (Ex. 11C, 12B, 12D – 12F) Motion under constant acceleration Vector Calculus and Circular motion with uniform angular velocity Newtons second law of motion and applications of Newtons laws of motion</p>	Exam 4.1a (Topic 18 and 19) 90min	Week 5 Thurs 10 th August Lessons 1 and 2
20	<p>Real and Complex Number System 3 - 4 Weeks (Ex. 1A, 1B, 1C plus additional material) Powers of complex numbers including de Moivre's Theorem Roots of complex numbers Use complex numbers in proving trigonometric identities Simple, purely mathematical applications of complex numbers</p>	Exam 4.1b (Topic 20) 90min	Week 10 Tues 12 th Sept Lessons 5 and 6
UNIT	TERM 4 TOPICS	ASSESSMENT	DUE DATE
21	<p>Number Theory (Booklet) Modular Arithmetic Congruence Prime Numbers Diophantine Equations</p>	Exam 4.3 (Topic 21) 120min	Week 6 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.