## YEAR 11 MATHEMATICS C WORK PLAN: Semester 2, 2017 – Mrs Every

<table>
<thead>
<tr>
<th>UNIT</th>
<th>TERM 3 TOPIC</th>
<th>ASSESSMENT</th>
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| 7    | Real and Complex Number Systems 2 (3 weeks) Text Ref: 2A-2F  
Definition and operations of complex numbers including standard and mod-arg form  
Algebraic representation of complex numbers in Cartesian, trigonometric and polar form  
Geometric representation of complex numbers – Argand Diagrams | In Class Test 2.1a Topic 7, 8 | Week 5  
Tues 8th August  
Lessons 3&4 (90 min) |
| 8    | Structures and Patterns 2 (1 week) Text Ref: additional material  
Recognition of patterns in well known structures including Pascal's Triangle and Fibonacci  
Method of finite differences and applications of patterns | Assignment 2.2 Topic 9 | Week 5: Handed out:  
Fri 11th Aug  
Week 7: Monitoring  
Week 2 Term 4  
Due Date: Mon 9th October |
| 9    | Vectors and Applications 2 (3 weeks) Text Ref: Review Chap 7, 8A-8F  
Review of vectors in two and three dimensions and their algebraic and geometric representations  
Review of operations on vectors and unit vectors  
Applications of vectors; forces and relative velocity | In Class Test 2.1b Topic 9 | Week 8  
Fri 1st Sept  
Lesson 3&4 (90 min) |
| 10   | Matrices and Applications 2 (1 weeks) Text Ref: 5A-5F  
Inverse matrices and systems of linear equation  
Gaussian elimination  
Determination of a matrix  
Inverse of a 3x3 matrix  
Cramer’s rule | Exam 2.3a Topic 10 | Week 3  
Tues 17th Oct  
Lesson 3&4 (90 min) |
| 10 ctd | Matrices and Applications 2 (cont 2 weeks) | | |
| 11   | Number Theory (3 weeks) Text Ref: Handout  
Primes, composites and the Fundamental Theorem of Arithmetic  
Divisors, Euclidean Algorithm, lowest common multiple and greatest common divisors  
Modular Arithmetic | Exam 2.3b Topic 11,12 | Week 8  
Exam Block |
| 12   | Calculus 1 (1 week) Text Ref: Handout  
Approximating small changes in functions using derivatives | | |

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