

**YEAR 12 EXTENSION 2
ASSESSMENT TASK
TERM 4, WEEK 8, 2009**

Date: To be negotiated
Time Allowed: 1 period

Marks: 100%
Weighting: 10%

Outcomes Addressed

- Uses the relationship between algebraic and geometric representation of complex numbers.

Complex Numbers

- Definition of a complex number.
- Solving equations with complex solutions.
- Properties and operations of complex numbers.
- Modulus-argument form of a complex number.
- Multiplication and division of complex numbers in modulus-argument form.
- De Moivre's Theorem.
- Roots of complex numbers.
- Operations on the Argand diagram including the use of vectors.
- Sketching the locus of point O which represents a complex number on the Argand diagram.
- Locus problems.

Instructions

- Attempt all questions
- Show all necessary working
- Write in blue pen, black pen or dark pencil
- Approved calculators may be used

NOTE:

- Students who do not achieve the outcome (less than 39%) in this assessment task will receive an 'Official Warning' – non completion of the HSC course.
- Students will be required to re-sit the task within 7 days.
- Students will be given 2 further opportunities to achieve the required outcome.
- Failure to achieve the outcome may result in the student receiving an 'N' determination.