

YEAR 11 EXTENSION 1

ASSESSMENT TASK

TERM 2, WEEK 10, 2009

Date: Thursday, 2nd July

Time Allowed: 1 period

Marks: 100

Weighting: 10%

Outcomes Addressed

- Relates the derivative to the gradient of a function and applies the rules of differentiation/
- Applies appropriate techniques for the study of trigonometry to solve problems.

Introductory Calculus

- Calculating limits.
- Understanding the concept of continuity and its relationship to graphs.
- Differentiating from first principles.
- Differentiating using the basic rule.
- Differentiating using the chain rule, the product rule and the quotient rule.
- Finding the equations of tangents and normals to curves.

Trigonometry

- Simplifying trigonometric expressions using the trigonometric identities.
- Explains of sums and differences.
- Expansions for double angles.
- The 't' results and their applications.
- Three-dimensional trigonometry.
- Solving equations of the form $a\cos\theta + b\sin\theta = c$.
- Solving other trigonometric equations.

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.