YEAR 11 EXTENSION 1
ASSESSMENT TASK
TERM 3, WEEK 5, 2009

Date: Wednesday, 26th August   **Marks: 100**

Time Allowed: 1 period   **Weighting: 10%**

Outcomes Addressed

- Applies coordinate geometry technique to solve problems.
- Understands and applies the relationship between the general quadratic function and its graph.

Linear Functions and Lines

- Find the distance between two points, the gradient of a line and the midpoint of an interval.
- Find the gradient given the angle of inclination of a line with the x-axis.
- Find the equation of a line given certain information.
- Find the equation of parallel and perpendicular lines.
- Use the properties of parallel and perpendicular lines.
- Find the point of intersection of two lines.
- Find the equation of a line through the point of intersection of two other lines.
- Find the perpendicular distance from a point to a line.
- Find the angle between two lines.
- Divide an interval in a given ratio both externally and internally.

The Quadratic Function

- Solve quadratic equations and inequalities.
- Use the discriminant to describe the roots of a quadratic equation.
- Find the sum and product of the roots of a quadratic equation.
- Use the properties of perfect squares.
- Find the maximum and minimum values of a quadratic function.
- Use the properties of positive and negative definiteness.
- Solve problems using the identity of two quadratic expressions.
- Solve equations reducible to quadratic 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.