



## Year 10 Accelerated Mathematics

### Task 1: In-Class Test

Due Date: 3 March 2021

**Task Distributed:** 17 February 2021

**Unit:** Linear functions, Quadratic Functions

**Task Type:** In-class test

**Task Weighting:** 20%

**Outcomes:** MA11-1, MA11-2, MA11-8, MA11-9

#### Task Description

**Duration: 50 minutes**

This exam will consist of two sections.

- **Section 1:** 5 multiple choice questions worth one mark each covering a range of the units listed above.
- **Section 2:** A mixture of short and long response questions worth one mark or more.

Your knowledge, skills and understanding in the following areas can be assessed in this examination:

##### Linear Functions

- Sketch straight line graphs using intercepts
- Derive equations of straight lines from given information
- Calculate gradients using the gradient formula
- Use properties of parallel and perpendicular lines
- Solve linear simultaneous equations by graphing and algebraically

##### Quadratic Functions

- Find roots and intercepts
- Shift graphs using constants
- Understand the effect of the 'a' value in  $y = ax^2 + bx + c$
- Sketch a range of curves

As this is an examination you will need to prepare for this task by:

- Making summary notes of each topic listed above (mind map, flow chart, dot points).
- Accessing practice past papers on Moodle.
- Regularly completing practice examination questions.
- Seeking teacher assistance on unclear work.
- Ensuring all set work is up to date.

#### Assessment Procedures

All students should be fully aware of the School Assessment Procedures for their year group. These were provided at the beginning of the school year and are available on the school website under the Learning Tab for each year group.

# NESA Glossary of Key Words

Understand the verb associated with the task. The verb will provide an understanding of the detail needed to successfully answer the question.

- **Calculate** - Provide a numerical answer
- **Demonstrate** - Show by example
- **Derive** - Use working to obtain a formula or equation
- **Evaluate** - Make a judgement based on criteria; determine the value of
- **Identify** - Recognise and name
- **Prove / Show** - Provide all algebraic steps and working in a logical sequence
- **Simplify** - Write an expression in its simplest form
- **Sketch** - Neatly draw a function on a number plane, clearly showing key features
- **Solve** - Use algebraic techniques to find a solution

Check the NESA Glossary of Key Words for further guidance

<https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/hsc-student-guide/glossary-keywords>

## Details of Submission

For successful completion of this assessment, you must have the following equipment:

- Board approved calculator
- Pencil, eraser and ruler for graphs and diagrams
- Blue or black pen

Students are NOT permitted to bring notes or any electronic device into the exam.

If you are absent from the examination you must contact the school on the day and follow school assessment and illness/misadventure policies and procedures. A valid attempt at all questions is required.

## Teacher Feedback and Student Self-Reflection

- The task will typically be returned to students within 14 days of the due date.
- At this time feedback including information on how to improve will be provided through analysis of the examination questions as a class discussion. Explanation will be provided as requested.
- Students can clarify or seek further feedback by speaking with their teacher or the assessment marker.

Upon return of the task, students will also be expected to complete a self-reflection. This will require students to review incorrect responses by seeking clarification from the teacher. Additionally, students will be required to complete a survey in reflection of the examination.

## How does this link to my learning?

- The structure of the questioning style in this task will mirror that of the HSC examination.
- This task will be used by you and your teachers to assess your knowledge and understanding of course outcomes and allow you to refine your skills as you prepare for the HSC examination.
- This task will draw together the above outcomes and assess your ability to apply a range of mathematical skills and techniques that you have covered in class.