



Year 12 Standard Mathematics

Task 1: Open Book Test

Due Date: Monday 9th December 2024 (Period 2)

Task Distributed: 25/11/2024

Unit: Budgeting and Household Finances & Non-right Angled Trigonometry

Task Type: Open Book Test

Task Weighting: 20%

Outcomes: MS11-1, MS11-3, MS11- 5, MS11- 6, MS11-10, MS2-12-3, MS2-12-4

Task Description Duration: 45 minutes

This is a **45 minute exam**. This task will be completed in exam conditions in the classroom.

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.

This is an open-book task, meaning that you are permitted to bring into the exam a double sided A4 summary notes. Your notes must be handwritten only. **You will submit your summary notes with your exam paper. These summary notes are worth approximately 5% of your total exam mark.**

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

Budgeting and Household Finances

- interpret and use information about a household's electricity, water or gas usage and related charges and costs from household bills
- plan for the purchase of a car
- plan for the running and maintenance of a car
- prepare a personal budget for a given income, taking into account fixed and discretionary spending.

Non-right Angled Trigonometry

- solve practical problems involving Pythagoras' theorem
- use the trigonometric ratios to find the length of an unknown side of the size of an unknown angle in a **right-angle triangle**
- work with angles correct to the nearest degree and/or minute
- use the Sine rule and Cosine rule to calculate an unknown angle or side in **non-right angled triangles**
- find the area of non right angled triangles
- solve practical problems involving True bearings and angles of elevation and depression

Preparing for this task

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.

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.

- MATCH / IDENTIFY: Recognise and name properties and features using correct mathematical terminology / notation
- DETERMINE: Make a judgment based on criteria
- CLASSIFY: Arrange into a category
- FIND: Determine the correct answer in either numerical form or as an expression
- SOLVE: Find the answer or expression showing clear working out

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 examination you must bring the following equipment.

- Board approved calculator
- Pencils and eraser for graphs
- **One A4 paper double sided summary note with handwriting only**
- Blue or black pen
- A ruler

Students are NOT permitted to bring an electronic device into the exam.

If you are away on the date of the task you need to call the school and file for misadventure with a doctor's certificate. You will then be required to attempt the task on the day of return to school.

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.

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.