Gymea Technology High School
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Year 10, Mathematics

Task 2: Half Yearly Exam

Due Date: Tuesday 19th May 2026

Task Distributed: 5th May	**Unit**: Linear Relationships, Rates of Change, Multi-stage Probability, Surface Area & Volume,
Task Type: Exam	**Task Weighting**: 25%
Outcomes: MAO-WM-01, MA5-LIN-C-02, MA5-RAT-P-01,MA5-PRO-C-01, MA5-ARE-C-01, MA5-VOL-C-01, MA5-NLI-C-01, MA5-NLI-C-02	

Task Description

This 80 - minute exam will consist of three sections.

- **Section 1:** 10 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 separated into topics worth one mark or more. This section will involve a number of literacy questions requiring you to write a short statement. These questions will be marked with the following symbol:

- **Section 3:** Problem solving question. This section will involve question(s) that require students to solve a topic-related Mathematics problem.

Surface Area & Volume	Multi-stage Probability
• Calculate the Volume of Prisms and Cylinders • Calculate the Surface Area of Prisms and Cylinders • Convert Volumes to units of Capacity • Use problem solving techniques to calculate the Volume and Surface Areas of composite solids	• Use a tree diagram and/or an array to list the sample space for two-step chance experiments, with and without replacement • Determine probabilities for compound events using a tree diagram and/or an array • Distinguish between dependent and independent events • Calculate probabilities of simple events where a condition is given that restricts the sample space.

LINEAR RELATIONSHIPS	VARIATION – RATES OF CHANGE
● Calculate the gradient ● Solve problems involving gradient and ● y-intercept including graphing techniques ● Determine the equation of the line in gradient-intercept form and general form. ● Determine whether two given lines are parallel or perpendicular. ● Determine if a point lies on a line	● Problems involving direct and inverse variation ● Identify and use formula for direct and inverse variation ● Identify and describe graphs involving direct and indirect variation ● Use linear conversion graphs to convert from one unit to another ● Graph equations representing direct variation

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/Evaluate:** Provide a numerical answer
- **Describe:** Provide characteristics and features
- **Explain:** relate cause and effect; provide why and/or how
- **Identify:** recognise and name
- **Sketch:** Neatly draw a line on a number plane, clearly showing key features
- **Justify:** support an argument or conclusion, with mathematical reasoning

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
- Blue or black pen
- A ruler

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 worked solutions and a literacy marking rubric.

Students can clarify or seek further feedback by speaking with their teacher or the assessment marker.

You will also receive feedback on your literacy performance based on the criteria in the school's literacy marking rubric. The marks achieved for literacy will account for between 10% – 20% of the maximum task value.

Upon return of the task, students will also be expected to complete a self-reflection in class when the tests are returned.

How does this link to my learning?

- This task will be used by your teachers to assess your knowledge and understanding of the outcomes listed that you have been studying in class this semester.
- The marks achieved in this exam will go towards your semester 1 report and may determine your class in any future class placements.
- 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 off the school website under the Learning Tab for each year group.

The GTHS Mathematics Literacy Criteria

Literacy Outcomes	Elementary achievement You have:	Limited achievement You have:	Satisfactory achievement You have:	High achievement You have:	Outstanding achievement You have:
Vocabulary *Uses technical vocabulary to explain concepts and/or range of precise and appropriate words for effect*	Very limited response. Few content words used.	Only simple words are used.	Some precise and technical words are used.	Sustained use of precise and technical words.	Sustained, consistent and fluent use of precise and technical words.
	0	1	2	3	4
Punctuation *Use of correct and appropriate sentence and other punctuation for effect, and to aid in reading of the text*	No evidence of correct sentence punctuation.	Sentence punctuation is correctly used in at least one place - *one sentence is punctuated correctly.*	Some correct sentence level punctuation (at least 50%). May attempt other punctuation where it is required.	Mostly correct sentence level punctuation (80%) and at least two correct examples of other punctuation.	Writing contains accurate use of all applicable punctuation.
	0	1	2	3	4
Sentences & Cohesion *The intentional construction of a variety of sentences to match purpose and audience, and the control of multiple sentence threads across the whole text.*	No clear evidence of sentences: a list of words OR text fragments.	At least one sentence is used correctly. Some meaning can be construed from the text.	Some correct formation of simple sentences, but may attempt more complex structures.	Most sentences are correct, including compound sentences.	All sentences are correct, effective and controlled, and include evidence of sophisticated structures)
	0	1	2	3	4
	Level of response is well below syllabus expectation	Level of response is below syllabus expectation	Level of response is equivalent to syllabus expectation	Level of response is above syllabus expectation	Level of response is well above syllabus expectation