Gymea Technology High School
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Year 8 Mathematics

# Task 5: Yearly Examination

**Due Date**: Friday Period 3-4, Week 5A, 14th November 2025

**Task Distributed**: 28th October, 2025

**Unit**: Pythagoras' Theorem, Area and Volume, Indices, Data Analysis, Linear Relationships

**Task Type**: Yearly Examination

**Task Weighting**: 25%

**Outcomes:** MA4-1WM, MA4-2WM, MA4-3WM, MA4-7NA, MA4-9NA, MA4-20SP, MA4-16MG

## Task Description

This is a 60-minute exam plus 5 minutes reading time**.** This task will be completed under exam conditions. The task will be separated into the following two sections:

**Section 1: Multiple choice questions**

- This section will consist of 10 multiple choice questions.
- The questions increase in difficulty throughout this section.

**Section 2: Long response questions**

- Parts of each question will be worth 1 mark or more covering a range of concepts listed in the areas of Learning above.
- The questions increase in difficulty throughout this section.
- All necessary working must be shown in the space provided on the examination paper.
- There will be questions in your assessment task that are assessing your literacy skills with the following symbol:

| Pythagoras' Theorem | Area and Volume |
|---|---|
| • Solving for hypotenuse and short sides<br>• Perimeter/area questions involving Pythagoras Theorem<br>• Pythagorean triads<br>• Prove whether a triangle is a right-angled triangle<br>• Interpret and solve problems involving right angle triangles using Pythagoras' theorem | • Find the area of quadrilaterals<br>• Calculate the area of composite shapes<br>• Convert between units of area<br>• Find the area of circles<br>• Find the volume of prisms and cylinders<br>• Convert between Volume and Capacity<br>• Calculate the capacity of prisms and cylinders |
| **Indices** | **Single Variable Data Analysis** |
| • Solve problems using index notation<br>• Apply index laws to evaluate expressions with numerical and algebraic bases<br>• Match the algebraic expression to its simplified solution<br>• Square root manipulation<br>• Cube and cube root<br>• Prime factorisation decomposition | • Calculate Mean, Median, Mode and Range for a given set of data<br>• Interpret and analyse data sets and displays including frequency distribution tables, stem and leaf, dot plots and histograms<br>• Identify outliers and clusters<br>• Identify the shape of a distribution<br>• Compare data sets<br>• Describe and compare census and samples |

**Linear Relationships**

- Represent a number pattern using a Table of Values
- Finding the rule for a geometric pattern
- Plot linear relationships on the Cartesian plane
- Use a pattern to calculate values for smaller or larger numbers off the table

**Preparing for this Task:**

- Regularly complete practice examination questions and access past exams on Moodle.
- Make summary notes for each topic listed above.
- Seek teacher assistance on any unclear work.
- Ensure all class work and homework 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
- FIND / CALCULATE Supply an answer
- SKETCH draw a graph or diagram label with the correct mathematical notation
- DETERMINE find out by calculation
- ROUND give an answer to a required number of decimal places
- SHOW provide the working to prove something works/exists

# Details of Submission

For successful completion of this examination 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.

# 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.
- Students may be asked to reflect on their performance.
- 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.

# How does this link to my learning?

- This task will be used by you and your teachers to assess your knowledge and understanding of course outcomes.
- The marks achieved in this exam will go towards your semester 2 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 |