



TMUA DIAGNOSTIC TEST

Student Name: James Jones

Test Date: 15th April

Overall Score: 15/40

Section 1 Score: 9/20

Section 2 Score: 6/20

OVERALL SUMMARY

This was a strong starting point for TMUA preparation. A score of 15/40 reflects a good grasp of some core mathematical skills and early signs of logical reasoning ability, though there are still areas for improvement. This result places the student just below the typical competitive range (25–30/40), meaning focused support can yield significant progress. The current result suggests that with consolidation of knowledge and strategic practice, a higher score is achievable.

SYLLABUS BREAKDOWN

Strengths

- **Algebraic Manipulation** – The student consistently handled simplifications and rearrangements of expressions (e.g., Q4, Q6, Q12), showing comfort with symbolic manipulation – a key building block for more complex questions.
- **Equation Solving and Rearranging Formulae** – There was confident handling of straightforward equations, and partial success with more layered formulae.
- **Numerical Reasoning** – Core number sense was reliable, with successful estimations and calculations (e.g., Q10, Q13).

Areas for Development – Section 1

- **Graphs and Transformations** – Questions involving sketching or interpreting graphs (particularly non-linear functions or transformations) were more challenging, indicating the need for visual strategies.
- **Inequalities & Intervals** – There was some difficulty in understanding how to express and work within ranges of values – a key element in TMUA Paper 1.
- **Exponentials and Logarithms** – These topics were attempted but not always confidently, suggesting either gaps in understanding or unfamiliarity with their real-world applications.

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Areas for Development – Section 2

- **Logical Implications & Argument Chains** – In Paper 2, some misunderstanding of logical connectors (e.g., “if”, “only if”) and implications led to errors in multi-step logical questions.
- **Evaluating Arguments** – The student showed the beginning of good reasoning but needs more experience analysing multi-line arguments for flaws or unstated assumptions.
- **Abstract and Conditional Reasoning** – Some multi-step logic or abstractly phrased problems were left incomplete – this skill tends to improve with guided exposure.

SUMMARY TABLE OF KEY SYLLABUS TOPICS

| Topic Area | Paper | Performance | Next Steps |
|-------------------------------------|-------|-------------------|---|
| Algebraic Manipulation | One | Good | Add timed questions and build fluency |
| Graphs & Transformations | One | Needs Improvement | Practise sketching and interpreting function graphs |
| Inequalities and Interval Reasoning | One | Developing | Use number lines and structured inequalities practice |
| Exponentials and Logarithms | One | Developing | Reinforce with concept checks and applied questions |
| Sequences & Series | One | Likely Unfamiliar | Introduce from basics and move to exam-style problems |
| Logical Reasoning & Implications | Two | Developing | Use puzzles and logic grid exercises |
| Argument Evaluation | Two | Developing | Practise identifying fallacies and weak conclusions |