

VCE VM Numeracy Unit 1

VCE VM Numeracy Unit 1 — Contents

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Series contents

This series covers the complete VCE Vocational Major Numeracy Unit 1 course as set out in the *VCE VM Numeracy Study Design (2023–2027)* — the four Unit 1 areas of study (Number; Shape; Quantity and measures; Relationships) and Unit 1 numeracy in context across the six numeracies, with the four-stage problem-solving cycle and the mathematical toolkit taught up front and used in every chapter. It comprises **six content workbooks** with cumulative **topic tests**, an **outcome-demonstration assessment booklet** (one assessment per Unit 1 outcome), a **GAT Section A numeracy practice booklet**, and a **formula sheet** collecting every formula used in the book. Each content workbook follows the same structure: concise theory in an accessible voice, scaffolded and unscaffolded worked examples, graded practice questions, a compact answer key, and fully-worked solutions. Every item is solvable with pen, paper and a basic calculator; rounding precision is always stated explicitly; made-up real-world tasks are labelled as such.

Methodology

Chapter 1 — The problem-solving cycle and mathematical toolkit (96 pp)

1A The four-stage problem-solving cycle · 1B Identify the mathematics: from real-world context to maths plan · 1C Estimate, check and reflect: is the answer reasonable? · 1D Communicate and report results · 1E The analogue toolkit: measuring and everyday tools · 1F The digital toolkit: calculators, spreadsheets, apps and online safety · 1G Numeracy words: familiar, unfamiliar and routine

Test A (multiple choice) and Test B (written response), with answers and fully-worked solutions, are included at the end of this workbook.

Unit 1 — Areas of Study 1–4 and numeracy in context

Chapter 2 — Number (92 pp)

2A Place value: whole numbers and decimals to two places · 2B Multiplication facts, factors and multiples · 2C Rounding whole numbers and decimals · 2D Order of operations · 2E Common fractions, decimals and percentages · 2F Simple proportions · 2G Dividing quantities by a simple ratio

Test A (multiple choice) and Test B (written response), with answers and fully-worked solutions, are included at the end of this workbook.

Chapter 3 — Shape (69 pp)

3A Two-dimensional shapes: properties and names · 3B Everyday three-dimensional objects · 3C Reflection, rotation and symmetry · 3D Patterns in shapes and shape technologies · 3E Simple scaling: enlargement and reduction

Test A (multiple choice) and Test B (written response), with answers and fully-worked solutions, are included at the end of this workbook.

Chapter 4 — Quantity and measures (85 pp)

4A Metric units and one-step conversion · 4B Perimeter and area of rectangles · 4C Volume and capacity of rectangular-based objects · 4D Time: analogue, digital and durations · 4E Temperature · 4F Estimation, measurement tools and accuracy

Test A (multiple choice) and Test B (written response), with answers and fully-worked solutions, are included at the end of this workbook.

Chapter 5 — Relationships (81 pp)

5A Rates in familiar situations · 5B Simple formulae: area, perimeter and cost per hour · 5C Conventions for writing simple algebra · 5D Tables, charts and graphs of change · 5E Simple substitution

Test A (multiple choice) and Test B (written response), with answers and fully-worked solutions, are included at the end of this workbook.

Chapter 6 — Unit 1 numeracy in context (93 pp)

6A Personal numeracy · 6B Civic numeracy · 6C Financial numeracy · 6D Health numeracy · 6E Vocational numeracy · 6F Recreational numeracy

Test A (multiple choice) and Test B (written response), with answers and fully-worked solutions, are included at the end of this workbook.

Assessment, practice and reference

Chapter 7 — Unit 1 outcome demonstration assessment (37 pp)

Three outcome-demonstration assessments for Unit 1 (one per outcome: a numeracy-in-context paper, a four-stage problem-solving task paper and a mathematical toolkit paper), each with answers and fully-worked solutions. These complement, not replace, school-designed assessment tasks.

Chapter 8 — GAT Section A numeracy practice (46 pp)

Two GAT Section A numeracy practice sets with answers and fully-worked solutions — VM students sit GAT Section A only; every item is written from this book's own content at Unit 1 depth.

Chapter 9 — Formula sheet (14 pp)

Every formula used in this book, each with its symbol definitions — compiled from the sections themselves.