

Foundation Mathematics Units 1 & 2

Contents

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Series contents

This series covers the complete VCE Foundation Mathematics Units 1 & 2 course as set out in the *VCE Mathematics Study Design (from 2023)*, across its four areas of study — Algebra, number and structure; Data analysis, probability and statistics; Financial and consumer mathematics; and Space and measurement — together with the working-mathematically and investigation processes of Outcomes 2 and 3. It comprises **twelve content workbooks**, cumulative **topic tests**, and a **practice-examination booklet**. Each content workbook follows the same structure: concise theory, scaffolded and unscaffolded worked examples, graded practice questions, a compact answer key, and fully-worked solutions. All content is written for a scientific calculator, in line with the examination.

Working mathematically

Chapter 1 — Working mathematically and investigations (20 pp)

1C What you need to know · 1D The problem-solving cycle · 1E Critical issues in problem solving

Topic 1 — Algebra, number and structure

Chapter 2 — Number and place value (25 pp)

2C Numbers you meet · 2D Place value · 2E Percentages · 2F Choosing the right calculation

Chapter 3 — Calculation, ratio and rates (27 pp)

3C Reasonableness · 3D Operations · 3E Order of operations · 3F Rates, ratio and proportion · 3G Powers and roots

Chapter 4 — Algebra and formulas (46 pp)

4C Connecting with algebra · 4D Describing relationships · 4E Conventions and terminology · 4F Applying skills · 4G Formulas in spreadsheets · 4H Manipulation

Topic 1 Test A (multiple-choice) and Test B (short answer), with fully-worked solutions, are included at the end of this workbook.

Topic 2 — Data analysis, probability and statistics

Chapter 5 — Collecting and representing data (57 pp)

5C What is data · 5D Collecting data · 5E Organising data · 5F Reading data · 5G Presenting data · 5H Telling the story · 5I Distorting data

Chapter 6 — Summarising and comparing data (43 pp)

6C Purpose of comparing data · 6D Comparing data sets · 6E Measures of centre · 6F Measures of spread (range, quartiles)

Topic 2 Test A (multiple-choice) and Test B (short answer), with fully-worked solutions, are included at the end of this workbook.

Topic 3 — Financial and consumer mathematics

Chapter 7 — Income and banking (30 pp)

7C Rates of pay · 7D Pay scales, awards and the pay gap · 7E Payslips · 7F Types of employment · 7G Bank accounts and statements

Chapter 8 — Taxation, interest and credit (39 pp)

8C GST · 8D Personal taxation and superannuation · 8E Interest, loans, time and risk · 8F Instalments · 8G Student loans · 8H Credit · 8I Lock-in contracts and subscriptions

Chapter 9 — Household budgeting and costs (47 pp)

9C Utility bills · 9D Other household expenses · 9E Optimising expenses · 9F Communications plans · 9G Inflation and CPI · 9H Informed spending · 9I Recreational spending

Topic 3 Test A (multiple-choice) and Test B (short answer), with fully-worked solutions, are included at the end of this workbook.

Topic 4 — Space and measurement

Chapter 10 — Shape, angles and plans (44 pp)

10C Dimensions of space and shape · 10D Angles · 10E Naming shapes · 10F Classifying shapes · 10G Plans, views and measurements · 10H Plans and scales · 10I Drawing plans

Chapter 11 — Measurement: units, area and volume (39 pp)

11C Converting units · 11D Measurement practice · 11E Measuring time · 11F π · 11G Area · 11H Surface area · 11I Volume

Chapter 12 — Maps, scale, time and travel (42 pp)

12C My place in space · 12D Key features of maps · 12E Speed, distance and time · 12F Distances and scales on maps · 12G Timetables, trips and routes · 12H Technology for navigation

Topic 4 Test A (multiple-choice) and Test B (short answer), with fully-worked solutions, are included at the end of this workbook.

Practice examinations

Chapter 13 — Practice examinations (62 pp)

Six complete practice examinations (two at each of three levels of difficulty), each a single 80-mark paper of 20 multiple-choice questions and twelve short-answer questions for a scientific calculator, with a Formula Sheet and fully-worked solutions.