

Mathematics Level 3

Contents

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Aboriginal and Torres Strait Islander content has been excluded as accuracy cannot be guaranteed, and it is better to be respectful than cover the entire curriculum inaccurately.

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Contents

This book is the **Mathematics Level 3** student workbook. It is written for **Level 3** of the Victorian Curriculum F–10 Version 2.0 (VC2), Mathematics — Year 3 in Victorian schools. **One year level, not a band.** Every content description in this book is a Level 3 content description; nothing here is Level 2 revision and nothing here is Level 4 ahead-of-time. The series is ten books:

- **Chapter 1 — Number: whole numbers and the four operations** — Maths3_Chapter01 — subtopics 1A–1F, and the Chapter 1 test (68 pp)
- **Chapter 2 — Number: fractions, money and modelling** — Maths3_Chapter02 — subtopics 2A–2C, and the Chapter 2 test (32 pp)
- **Chapter 3 — Algebra: number facts and unknowns** — Maths3_Chapter03 — subtopics 3A–3C, and the Chapter 3 test (31 pp)
- **Chapter 4 — Measurement** — Maths3_Chapter04 — subtopics 4A–4E, and the Chapter 4 test (63 pp)
- **Chapter 5 — Space** — Maths3_Chapter05 — subtopics 5A and 5B, and the Chapter 5 test (31 pp)
- **Chapter 6 — Statistics** — Maths3_Chapter06 — subtopics 6A–6C, and the Chapter 6 test (52 pp)
- **Chapter 7 — Probability** — Maths3_Chapter07 — subtopics 7A and 7B, and the Chapter 7 test — the student’s first probability in the whole VC2 Mathematics sequence (28 pp)
- **Chapter 8 — Practical and investigation tasks** — Maths3_Chapter08_Tasks — tasks K1–K4 with marking guides, for the six content descriptions a written test cannot evidence (21 pp)
- **Chapter 9 — End-of-year review** — Maths3_Chapter09_Review — the cumulative review drawn from all six strands, with its marking guide (8 pp)
- **Chapter 0 — Contents** — Maths3_Chapter00_Contents — this booklet: how to use the book, what it covers, teacher notes and safety notes (00 pp)

Series total: ten books ≈ 334 pages. The built books — Maths3_Chapter00_Contents, Maths3_Chapter01 to Maths3_Chapter07, Maths3_Chapter08_Tasks and Maths3_Chapter09_Review — are in S :
\\Files\\VC2Maths\\Textbook3\\.

How to use this book

The chapters follow the strands. Chapters run Number → Algebra → Measurement → Space → Statistics → Probability. Number carries 9 of the 24 content descriptions, so it is split across Chapters 1 and 2 — whole numbers and the four operations first, then fractions, money and modelling. Both chapters stay wholly inside the Number strand: this is a sizing split, not a departure from the strand order.

Any teaching order works, with one exception. The book is teachable in any order, except that Chapter 3 assumes Chapter 1: 3B uses the addition and subtraction facts that Chapter 1 builds, and 3C extends the multiplication work of 1D.

One content description per subtopic. Each of the 24 subtopics owns exactly one VC2 content description, and its teaching sequence is built to deliver that content description. VCAA’s elaborations — the examples it suggests for what a content description might look like — are carried in each subtopic’s code line for linkage and coverage, not as a checklist to work through.

The shape of every subtopic. Each subtopic opens with its VC2 code and elaboration ids, a short introduction, and a **You will need** line naming its materials. Then comes the teaching section, worked examples — first with help, then on your own — practice questions with help and then on your own, and a short applied or reasoning item in a real Victorian context. Answers and fully-worked answers close every subtopic, so a student can check their own work.

A subtopic is not one lesson. Each of the 24 subtopics is several lessons of work. Year 3 subtopics are diagram-led and materials-led: counters, grid paper, rulers, clocks, dice and the rest of the materials do the explaining, and the prose supports them.

The book is written for a Year 3 reader. Sentences are short. Every new mathematics word is named and taught where it first appears, and the general vocabulary is held at or below Year 3 reading level, so the difficulty lands on the mathematics, not on the reading.

The notation in this book. Numbers above 9999 use a space as the group separator: 10 000, 425 000, never a comma. Multiplication is $\times$, division is $\div$, and subtraction uses a proper minus: $534 - 395 = 139$. Fractions are set as fractions, not $1/2$. Money is \$1.85, 50c, \$2. Times are 12:15, 10:05, quarter past 12. Clocks are **analog clocks** — that is the curriculum’s own spelling, kept deliberately. There is no am/pm anywhere in the book: that is a Level 4 idea.

Everything real is really real. Every price, timetable, capacity, crowd figure and pack size in the book is real, named and Victorian, and carries a source line with a retrieval date, so a reader can see where the numbers come from.

Checks, tasks and the review are untimed. Every instrument in this book is a classroom check, not an examination. There is no time to beat, materials are permitted wherever the curriculum assumes them, and the guidance durations are for a teacher planning a lesson, not a limit. See the teacher notes below.

Which book is which. This is the single-level Year 3 book. The Levels 3–4 band book is a separate product that carries the same Level 3 content for composite Year 3/4 classes; a Year 3 teacher buys this one, and a composite 3/4 teacher buys the band one.

What this book covers

The table below is the coverage register for this book: all 24 content descriptions of VC2 Mathematics Level 3, each against the subtopic that owns it, with its elaboration ids and the count of banked multiple-choice questions already keyed to it. Every code appears exactly once as an owner. There are no unowned codes and no codes deferred to another book. The series checks itself against this map.

#	Code	Strand	Owner	Subtopic title	Elaboration ids	MCQs
1	VC2M3A01	Algebra	3B	Addition and subtraction as inverse operations; finding unknown values	.E01, .E02, .E03	96
2	VC2M3A02	Algebra	3A	Addition and subtraction facts to 20, extended to larger numbers	.E01, .E02, .E03	6
3	VC2M3A03	Algebra	3C	Multiplication facts for 3, 4, 5 and 10 and the related division facts	.E01, .E02, .E03, .E04	6
4	VC2M3M01	Measurement	4A	Choosing metric units and making estimates	.E01, .E02, .E03, .E04	96
5	VC2M3M02	Measurement	4B	Measuring and comparing	.E01, .E02, .E03, .E04,	96

#	Code	Strand	Owner	Subtopic title	Elaboration ids	MCQs
				length, mass and capacity	.E05	
6	VC2M3M03	Measurement	4C	Units of time and the duration of events	.E01, .E02, .E03, .E04, .E05	96
7	VC2M3M04	Measurement	4D	Reading analog and digital clocks to the nearest minute	.E01, .E02, .E03	96
8	VC2M3M05	Measurement	4E	Angles as measures of turn, compared with a right angle	.E01, .E02, .E03, .E04	96
9	VC2M3N01	Number	1A	Odd and even numbers	.E01, .E02, .E03, .E04, .E05	273
10	VC2M3N02	Number	1B	Reading, writing and ordering numbers beyond 10 000	.E01, .E02, .E03, .E04, .E05	288
11	VC2M3N03	Number	2A	Unit fractions and their multiples	.E01, .E02, .E03, .E04	192
12	VC2M3N04	Number	1C	Adding and subtracting two- and three-digit numbers	.E01, .E02, .E03, .E04, .E05, .E06	192
13	VC2M3N05	Number	1D	Multiplying and dividing one- and two- digit numbers	.E01, .E02, .E03, .E04	144
14	VC2M3N06	Number	1E	Estimating quantities and judging whether an answer is reasonable	.E01, .E02, .E03, .E04	96
15	VC2M3N07	Number	2B	Dollars and cents	.E01, .E02	96
16	VC2M3N08	Number	2C	Modelling additive and multiplicative problems,	.E01, .E02, .E03, .E04, .E05	96

#	Code	Strand	Owner	Subtopic title	Elaboration ids	MCQs
				including money		
17	VC2M3N09	Number	1F	Algorithms that investigate numbers	.E01, .E02, .E03, .E04	96
18	VC2M3P01	Probability	7A	The language of chance: likely, unlikely, certain, impossible	.E01, .E02, .E03	96
19	VC2M3P02	Probability	7B	Repeated chance experiments and the variation in results	.E01, .E02	96
20	VC2M3SP01	Space	5A	Making, comparing and classifying three- dimensional objects	.E01, .E02, .E03, .E04, .E05, .E06	96
21	VC2M3SP02	Space	5B	Two- dimensional representation s of familiar environments	.E01, .E02, .E03, .E04, .E05	96
22	VC2M3ST01	Statistics	6A	Acquiring and recording data: frequency tables and spreadsheets	.E01, .E02, .E03, .E04, .E05	96
23	VC2M3ST02	Statistics	6B	Creating and comparing data displays	.E01, .E02, .E03, .E04	96
24	VC2M3ST03	Statistics	6C	Guided statistical investigations	.E01, .E02, .E03, .E04, .E05	96
				Totals	100	2 733

Notes on this table:

- The **Elaboration ids** column shows suffixes only, for width; the full id is the code plus the suffix — row 9 is VC2M3N01.E01 ... VC2M3N01.E05. The suffix is positional in VCAA's order and is never renumbered.
- **Elaborations are illustrations, not requirements.** The content description is the expectation; an elaboration is one way VCAA suggests it might look. The coverage check asks whether each content description was taught — an elaboration that is not used is not a gap.

- **Nine elaborations are reserved and are not taught in this book.** They are the ones that carry Aboriginal and Torres Strait Islander content: VC2M3N02.E05, VC2M3N05.E04, VC2M3A01.E03, VC2M3M03.E05, VC2M3M05.E04, VC2M3SP01.E05, VC2M3SP01.E06, VC2M3SP02.E05 and VC2M3ST03.E05. They are reserved under the estate’s decision on Aboriginal and Torres Strait Islander cultural knowledge; the notice on the first page of every booklet in this series says this. Because elaborations are illustrations, no content description is left without a teaching sequence — every code is still delivered in full by its subtopic.
- **The counts close.** 24 codes, 24 owners — every code is owned exactly once. 100 elaboration ids, each allocated exactly once. 2 733 banked questions keyed to these codes. Register check run against the authority file 2026-08-07: 24 codes listed, 24 codes in the file, 0 duplicated owners, 0 unowned codes, 0 codes left to another book, 100 elaboration ids listed and 100 in the file, and the MCQ column sums to 2 733, matching the file.
- **Codes that do not exist.** Level 3 Number ends at N09, Algebra at A03, Measurement at M05, Space at SP02, Statistics at ST03, Probability at P02. There is no VC2M3N10, no VC2M3A04, no VC2M3M06, no VC2M3SP03 — the numbering stops because the curriculum stops, not because anything is missing.

What this book does not cover. This book covers Level 3 only. What Level 2 taught is assumed, not re-taught: numbers to at least 1000, addition and subtraction facts to 20, multiplication facts for twos, halves, quarters and eighths, measuring with informal units, the analog clock to the quarter hour, quarter, half and three-quarter turns, locating positions in a two-dimensional representation, and collecting, sorting and displaying categorical data. Everything past the Level 3 line stays out: decimals and decimal notation, equivalent fractions, fractions on a number line and mixed numerals, multiplication-facts recall to 10×10 , temperature as a measured quantity, perimeter and area, am/pm and conversions between units of time, angle names such as acute and obtuse, grid references and symmetry, many-to-one pictographs, and independent and dependent events are all Level 4 content; degrees and protractors arrive at Level 5, converting between metric units at Level 6, and pronumerals at Level 7. Towards Foundation Levels A–D are a separate product for students with disability working below Foundation Level, and VCE content is nowhere in this book.

Teacher notes

Assessment in this book is a set of **classroom checks**: untimed in principle, with a guidance duration for a teacher planning a lesson, and materials permitted wherever the content description assumes them. **Nothing here is an examination**, and nothing is formatted as one.

Administration — the standing rules. These apply to every instrument in the book:

- Completion is **untimed**. The guidance durations in the tables below are for planning a lesson, not a limit to beat.
- **Materials are permitted** wherever the content description assumes them: counters, rulers, measuring jugs, kitchen scales, connecting cubes, clocks, dice, spinners and coins.
- **Calculator status is set by the content description, not by preference.** Subtopics 1C and 3A are calculator-free — their content descriptions say “without a calculator”. Everywhere else a calculator is permitted where the content description or its elaborations name one: 3B and 3C are not calculator-free, even though they sit either side of 3A.
- **A marking guide ships with every instrument.** Every rubric is written in the language of that content description’s achievement-standard extract from the authority file, so a teacher’s judgement maps to VCAA’s wording without translation.

The chapter tests. One test per chapter, seven tests in all. Items are predominantly short-answer with diagrams and materials; multiple choice is capped at a quarter of any test, because at this level it hides method. Every content description contributes at least 3 separately scored marks to its chapter test — that is the property a coverage audit reads off the marking guide.

Test	Chapter	CDs assessed	Marks	Guidance duration
T1	1 — Number: whole numbers and the four operations	6	25	30 min
T2	2 — Number: fractions, money and modelling	3	15	25 min
T3	3 — Algebra: number facts and unknowns	3	15	25 min
T4	4 — Measurement	5	20	30 min
T5	5 — Space	2	10	20 min
T6	6 — Statistics	3	15	25 min
T7	7 — Probability	2	10	20 min
	Chapter tests	24	110	

The practical and investigation tasks. Six content descriptions cannot be evidenced by a written test item alone, because the verb in the content description requires the student to *do* something — **make, measure, conduct**. They are still owned by their subtopics in the coverage map; the tasks below are how the book assesses them.

Task	Assesses	Why a written item is not enough	Marks
K1 — Measuring and estimating with metric units (practical)	VC2M3M01, VC2M3M02	“measure ... using instruments with labelled markings” — the student must handle the instrument	12
K2 — Guided statistical investigation	VC2M3ST01, VC2M3ST03	“acquire data ... conduct guided statistical investigations”	15
K3 — Repeated chance experiment	VC2M3P02	“conduct repeated chance experiments ... recognise and discuss the variation”	10
K4 — Making and classifying objects (construction)	VC2M3SP01	“make, compare and classify objects”	8
	Tasks		45

Each task ships with a marking guide written as **observable student actions**, not adjectives — “reads the jug at eye level and records to the nearest marked graduation”, not “measures carefully”. K2 and K3 are the natural place to run a joint Maths–Science investigation; if a class does, the marking guide still scores it against the Mathematics achievement standard.

Coverage of assessment. All 24 content descriptions are assessed at least once in a chapter test. The six content descriptions in the task table are assessed by a practical or investigation task **and additionally** appear in written form in T4, T5, T6 or T7 — interpreting a scale reading already drawn, or reading a completed frequency table — so a student absent for a practical is not left with an unassessed content description.

The end-of-year review — 30 marks. Run once, after Chapter 7. The review draws on all six strands and is cumulative: no new content, and no content description is assessed there that was not already assessed in its chapter test. It exists so a Year 3 teacher can check retention before students move to Level 4, and so a Year 4 teacher receiving the class can see where the gaps are.

Total assessed marks: 110 (chapter tests) + 45 (tasks) + 30 (end-of-year review) = 185.

The question bank. The bank holds 2 733 multiple-choice items keyed to the 24 codes in the coverage map. They are a practice resource for the subtopic exercise sets — they are not a test-building shortcut, and no test in this book is more than a quarter multiple choice.

Safety notes

The practical work in this book uses everyday classroom materials — counters, rulers, measuring jugs, kitchen scales, connecting cubes, clocks, dice, spinners and coins — and every task names its materials and its controls at the point of use, on the same page as the task. Standing rules, in every part of the book:

1. **No flame, no heating, no chemicals, no blades.** The only cutting in the book is scissors for paper and straws in the Chapter 5 construction work and task K4, used under supervision.
2. **Water stays small and local.** The capacity work in Chapter 4 and task K1 uses small amounts of water. Spills are wiped up at once — a wet floor is a slip hazard — and water used for measuring is never drunk.
3. **Food is checked first.** If a lesson uses food items as counting or grouping materials, the teacher checks allergies before the items are handed out.
4. **Small items stay on the desk.** Counters, dice and coins are not food; they are collected and counted back at the end of the lesson.
5. **Maps stay on school grounds.** Chapter 5 sketches and plans familiar environments — the classroom and the school. Any mapping done outside the classroom stays on school grounds, with the class in sight of the teacher.
6. **Dice and spinners stay with their task.** The chance experiments in Chapter 7 and task K3 use dice and spinners as equipment for recording results, not as games; the teacher collects them when the trials are done.