

Mathematics Level 7

End-of-level review

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End-of-level review

This paper reviews everything in your Geography Level 7 workbook — all six chapters, all twenty-nine sections. It is a school-designed paper written for your class. It is **not** a VCAA exam and VCAA has not approved it, and there is no time to beat: the suggested time is a guide, not a limit. The paper has **30 questions in six parts**, worth a total of **93 marks**.

What is assessed

All 29 content descriptions this book teaches:
VC2HG8K01–VC2HG8K22 and VC2HG8S01–
VC2HG8S07

Total marks

93

Suggested time

100 minutes (about two lessons)

You will need

This paper, your workbook (Chapters 1–6), a pencil and a ruler

How to use this paper

- Work through the parts in order, and answer every question in the ruled space provided.
- This is an **open-book** paper. Many questions ask you to use a figure, a table or a case study from your workbook — the question always tells you where to look.
- Words like *explain* and *using* mean full sentences with evidence from the book: a named number, place or date — not just an opinion.
- On questions where reasonable people disagree, marks go to the quality of your reasoning, never to the side you reach. Two students who reach opposite conclusions can both earn full marks.

Part 1 — Water in the world

Chapter 1 · sections 1A–1E · Questions 1–5 · 15 marks

Question 1 (1A, VC2HG8K01) [3 marks]. Water as a renewable resource.

(a) Section 1A sorts resources into three classes: renewable, non-renewable and continuous. Using the definition section 1A gives, explain why water is classed as a renewable resource. **[1 mark]**

(b) Section 1A separates **green water** from **blue water**. Classify each store as green water or blue water: (i) rain held in the soil of a wheat paddock; (ii) water in a dam. **[1 mark]**

(c) Using the Murray–Darling Basin map in section 1A, state the share of Australia’s land the basin covers and the share of Australia’s food its rivers grow. **[1 mark]**

Question 2 (1B, VC2HG8K02) [3 marks]. The value of water.

(a) Section 1B looks at the value of water through five lenses (Figure 1B.1). Name three of them. **[1 mark]**

(b) Figure 1B.2 shows the Snowy River's flow at Jindabyne before and after the Snowy Mountains Scheme. State the share of the flow that passed Jindabyne before the Scheme and the share after it, and explain what an **environmental flow** is, as section 1B defines it. **[2 marks]**

Question 3 (1C, VC2HG8K03) [3 marks]. Australia's water resources.

(a) Figure 1 in section 1C gives Australia's water balance: about 426 millimetres of rain falls in an average year and about 368 millimetres returns to the sky. State how many millimetres run off into rivers, dams and groundwater, and what share of the rain that is. **[1 mark]**

(b) Figure 5 in section 1C shows the water flowing into Melbourne's storages: a long-term average of 615 gegalitres a year (1913–1996) against 376 gegalitres a year in the drought years (1997–2009). State the gap between the two, in gegalitres a year. **[1 mark]**

(c) Section 1C uses the sponge effect (Figure 10) to explain why dams stay low even after the rain returns. Explain, in one sentence, what dry catchments do to the first rains of a breaking drought. **[1 mark]**

Question 4 (1D, VC2HG8K04) [3 marks]. Water scarcity.

(a) Section 1D distinguishes **physical water scarcity** from **economic water scarcity**. State the difference between them. **[2 marks]**

(b) The guide-line table in section 1D puts absolute water scarcity at less than 500 cubic metres of renewable fresh water per person a year. Using the table and the per-person chart in section 1D, classify Jordan (about 61 cubic metres per person a year), and name the West Asian country on the chart with even less. **[1 mark]**

Question 5 (1E, VC2HG8K05) [3 marks]. Hazards: causes, impacts and responses.

(a) Using Figure 7 in section 1E, state one difference between how a river flood and a flash flood build up. **[1 mark]**

(b) Example 1 in section 1E traces the cause chain of Cyclone Debbie (2017). State the category and wind speed at its landfall near Airlie Beach, the date of that landfall, and one piece of evidence from the example showing that a weakening cyclone can still do its greatest harm after landfall. **[2 marks]**

Part 2 — Place and liveability

Chapter 2 · sections 2A–2F · Questions 6–11 · 18 marks

Question 6 (2A, VC2HG8K06) [3 marks]. Measuring liveability.

(a) Section 2A defines an **objective measure** and a **subjective measure**. State the difference between them. **[1 mark]**

(b) The EIU weights figure in section 2A gives the five category weights used in the Global Liveability Index. State the two categories with the highest weight, with their weights, and the category with the lowest weight. **[1 mark]**

(c) The population figure in section 2A shows where Victorians lived at 30 June 2024. State how many people lived in Greater Melbourne and what share of Victoria’s population that was. **[1 mark]**

Question 7 (2B, VC2HG8K07) [3 marks]. Services and accessibility.

(a) Section 2B defines **accessibility** as “how easy it is for a particular person to reach the services and facilities they need and want”, and says the answer changes depending on who is asking. Explain what this means, and give two people whose answers would differ. **[1 mark]**

(b) Figure 4 in section 2B gives GP visits per person in 2023–24. State the rate for metropolitan areas and the rate for the most remote areas, and calculate the difference. **[1 mark]**

(c) Figure 2 in section 2B shows where people live by remoteness area. State the share of Australia’s people living in major cities and the share for Victoria. **[1 mark]**

Question 8 (2C, VC2HG8K08) [3 marks]. Environmental quality and perception.

(a) The components figure in section 2C gives six parts of environmental quality. Name three of them. **[1 mark]**

(b) The EPA air-quality categories figure in section 2C classifies PM2.5 readings. Classify a reading of 30 micrograms per cubic metre, and state the reading range for the **Good** category. **[1 mark]**

(c) The reports-by-region chart in section 2C shows community pollution reports to EPA Victoria in 2024–25. State the metropolitan Melbourne region with the most reports and its number, and give the section’s reason why Brooklyn’s particle count is high. **[1 mark]**

Question 9 (2D, VC2HG8K09) [3 marks]. Social connectedness and community identity.

(a) Section 2D defines **social connectedness** and **community identity**. State the difference between them. **[1 mark]**

(b) The lone-person chart in section 2D uses 2021 census data. State the share of lone-person households in the City of Melbourne and in the City of Casey. **[1 mark]**

(c) Worked demonstration 2 in section 2D examines a student claim that, because so many households in the City of Melbourne are lone-person, most people there must be lonely. Using the section’s distinction between counting and asking, explain in one sentence why this claim goes too far. **[1 mark]**

Question 10 (2E, VC2HG8K10) [3 marks]. Evaluating liveability through three concepts.

(a) Section 2E evaluates liveability through three concepts used as lenses. Name all three. **[1 mark]**

(b) The hospital chart in section 2E compares four Victorian places. State the place furthest from its nearest major hospital, the distance, and the name of that hospital. **[1 mark]**

(c) The environmental-events figure in section 2E records two Victorian case studies. Name the 2014 event and its town, and state one finding of the 2016 official inquiry into it. **[1 mark]**

Question 11 (2F, VC2HG8K11) [3 marks]. Responses at the local scale.

(a) Section 2F defines a **response** and says when a response **enhances liveability**. Give both definitions. **[1 mark]**

(b) The four-stream recycling figure in section 2F shows four waste streams for Victorian households. Name all four, and state why batteries and electronics must go in none of the bins. **[1 mark]**

(c) The who-does-what figure in section 2F shows four levels of action. Name the level that runs kerbside bins and recycling collection, and the level that funds the Safe Pedestrian Program. **[1 mark]**

Part 3 — Landforms and landscapes

Chapter 3 · sections 3A–3F · Questions 12–17 · 18 marks

Question 12 (3A, VC2HG8K12) [3 marks]. Australia's landscapes.

(a) Section 3A distinguishes a **landscape** from a **landform**. State the difference between them. **[1 mark]**

(b) Table 1 in section 3A lists five example landscape types. Name all five. **[1 mark]**

(c) Using Table 2 in section 3A, state the largest and the smallest of Australia's ten named deserts with their areas, and the share of the mainland the ten deserts together cover. **[1 mark]**

Question 13 (3B, VC2HG8K13) [3 marks]. The value of landscapes and landforms.

(a) Section 3B distinguishes three kinds of value people place on landscapes and landforms. Name all three, and state what one of them means as the section defines it. **[1 mark]**

(b) The Mount Fuji card in section 3B gives facts about Fuji's World Heritage listing. State the year it was listed, the height of the mountain, and the century from which its pilgrimage tradition dates. **[1 mark]**

(c) The Great Barrier Reef tourism figure in section 3B gives four numbers about Reef tourism. State how many visitors a year come to the Reef, how many jobs Reef tourism supports, and the share of visits that cluster near Cairns, Port Douglas and the Whitsundays. **[1 mark]**

Question 14 (3C, VC2HG8K14) [3 marks]. The processes that build landforms.

(a) The process-families figure in section 3C splits geomorphological processes into two families. State what powers each family, and name one process in each family. **[1 mark]**

(b) Section 3C defines **physical weathering** and **chemical weathering**. State the difference between them. **[1 mark]**

(c) The coastline-sequence figure in section 3C shows how sea stacks form. Put **cave**, **arch**, **stack** and **stump** in order, and name the energy source that drives every step. **[1 mark]**

Question 15 (3D, VC2HG8K15) [3 marks]. Human changes and management.

(a) Figure 3D.1 in section 3D shows six ways people change landforms. Name three of them. **[1 mark]**

(b) Figure 3D.7 in section 3D shows the water flowing into Hume Dam in a year. State the inflow in the driest year on record and in the wettest year on record, and the dam's full capacity. **[1 mark]**

(c) Figure 3D.9 in section 3D matches problems to management responses. Name the response built at weirs so native fish can pass the wall, and state the number of barriers to fish movement in the Murray–Darling Basin that section 3D records. **[1 mark]**

Question 16 (3E, VC2HG8K16) [3 marks]. Geomorphological hazards.

(a) Section 3E names four stages of managing hazards. Name all four. **[1 mark]**

(b) Worked example 1 in section 3E compares the Newcastle (1989) and Mansfield (2021) earthquakes. State the magnitude and the death toll of each, and explain in one sentence why their impacts differed so much. **[2 marks]**

Question 17 (3F, VC2HG8K17) [3 marks]. Interconnection and change.

(a) Section 3F defines **interconnection** and a **cause-and-effect chain**. Give both definitions. **[1 mark]**

(b) Section 3F says the effects of a change can arrive with three **shifts**. Name all three. **[1 mark]**

(c) The Menindee chain figure in section 3F traces the fish kills of December 2018 and January 2019. State the river and town involved, the immediate cause the NSW Government investigation found, and the number of fish that died. **[1 mark]**

Part 4 — Changing nations

Chapter 4 · sections 4A–4E · Questions 18–22 · 15 marks

Question 18 (4A, VC2HG8K18) [3 marks]. Urbanisation in urbanising countries.

(a) Section 4A separates **urban growth** from **urbanisation**. Using the word *share*, state the difference between them. **[1 mark]**

(b) Figure 4 in section 4A graphs the urban share of the United States population at each ten-year census, 1790 to 2020. State the census year in which the share first passed 50 per cent, and the share in 2020. **[1 mark]**

(c) Figure 3 in section 4A is the push–pull model. State what the terms **push factor** and **pull factor** mean, as section 4A defines them. **[1 mark]**

Question 19 (4B, VC2HG8K19) [3 marks]. Migration and city growth.

(a) Figure 9 in section 4B rebuilds Australia’s capital-city growth in 2024–25 from its three parts. Name the three parts with their values, and state the total growth they build to. **[2 marks]**

(b) Figure 11 in section 4B gives China’s population change from end-2024 to end-2025: the whole country fell, while urban areas grew. Explain, in one sentence, what this shows about how China’s cities are growing. **[1 mark]**

Question 20 (4C, VC2HG8K20) [3 marks]. Comparing urban patterns.

(a) Figures 4C.4 and 4C.7 map where urban settlements sit in Australia and the United States of America. State one similarity and one difference in the distribution of urban settlements between the two countries. **[2 marks]**

(b) Worked example 1 in section 4C finds that Australia’s five million-plus cities hold about 62 per cent of its people, while the twelve biggest United States cities hold only about 8 per cent. State the term section 4C uses for Australia’s pattern, and name one of its six causes from Figure 4C.9. **[1 mark]**

Question 21 (4D, VC2HG8K21) [3 marks]. Managing Australia's cities.

(a) The Plan Melbourne drawing in section 4D shows the city's growth strategy. Name two of its features. **[1 mark]**

(b) The climate cards in section 4D record measured change in Australia. State how much the average temperature has risen since 1910, and one recorded change in cool-season rainfall. **[1 mark]**

(c) Define the **urban heat island** as section 4D defines it, and name one remedy the section gives for it. **[1 mark]**

Question 22 (4E, VC2HG8K22) [3 marks]. Concepts at work.

(a) Section 4E re-reads the chapter through five concepts. Name all five. **[1 mark]**

(b) Figure 4E.6 shows what made Australia's capital cities grow in 2024–25. State the biggest flow that added people, with its value, and explain in one sentence why that flow is an example of **interconnection**. **[2 marks]**

Part 5 — Doing geography: the inquiry toolkit

Chapter 5 · sections 5A–5D · Questions 23–26 · 12 marks

Question 23 (5A, VC2HG8S01) [3 marks]. Forming an inquiry question.

(a) Section 5A gives three tests for a strong focus question. State all three. **[1 mark]**

(b) Figure 5 in section 5A splits the causes of Melbourne's low storages in June 2009 into **immediate causes** and **underlying causes**. State the difference between them, and give one example of each from the figure. **[1 mark]**

(c) Figure 7 in section 5A shows Melbourne's storage levels at five dates. State the level in June 2009 and the level on 13 December 2024. **[1 mark]**

Question 24 (5B, VC2HG8S02) [3 marks]. Collecting and checking data.

(a) Section 5B defines a **primary source** and a **secondary source**. State the difference between them, and give one example of each from the section. **[1 mark]**

(b) Worked demonstration 1 in section 5B compares a street tally in Leongatha with the 2021 census. State the share of separate houses on the street and the share the census gives for the town, and explain why the census is the stronger source for the whole town. **[1 mark]**

(c) Section 5B lists five advanced search tools. Name two of them and state what each does. **[1 mark]**

Question 25 (5C, VC2HG8S03) [3 marks]. Representing data.

(a) The decision chart in section 5C (Figure 5C.1) matches forms to what you want to show. State the best form for each of these: change over time; comparing categories; exact values. **[1 mark]**

(b) Section 5C gives six parts every map should have, whose first letters spell **BOLTSS**. State what the six letters stand for. **[1 mark]**

(c) Figure 5C.9 in section 5C maps China's people using a line drawn by Hu Huanyong in 1935. Name the line, and state the share of China's people living east of it and the share of the land they occupy. **[1 mark]**

Question 26 (5D, VC2HG8S04) [3 marks]. Interpreting and analysing data.

(a) Section 5D defines a **pattern** and a **trend**. State the difference between them. **[1 mark]**

(b) The two-countries table in section 5D compares Australia and the United States. State the urban share of each country in 2023, and explain why the table's Melbourne and New York figures cannot be used to rank the two cities. **[1 mark]**

(c) The health-services charts in section 5D show two measures moving together as places get more remote. State the relationship the section infers, and the caution it gives about two things moving together. **[1 mark]**

Part 6 — Concluding, deciding and communicating

Chapter 6 · sections 6A–6C · Questions 27–30 · 15 marks

Question 27 (6A, VC2HG8S05) [3 marks]. Evidence-based conclusions.

(a) Section 6A contrasts an opinion with an evidence-based conclusion. State one difference between them. **[1 mark]**

(b) Section 6A organises conclusions through four concepts used as lenses. Name all four. **[1 mark]**

(c) Section 6A's ethics toolkit includes the **everyone test**. State the question the test asks, and the thinker and year section 6A gives for it. **[1 mark]**

Question 28 (6B, VC2HG8S06) [3 marks]. Strategies for action.

(a) Section 6B judges strategies with three tests. Name all three. **[1 mark]**

(b) The Target 155 chart in section 6B shows home water use in Melbourne. State the pre-drought use per person per day, the Target 155 goal, and the saving between them. **[1 mark]**

(c) Section 6B separates **individual action** from **collective action**. Classify each of these: (i) taking an old phone to a collection point; (ii) a state ban on e-waste going to landfill. Then state the date Victoria's ban began. **[1 mark]**

Question 29 (6C, VC2HG8S07) [3 marks]. Communicating with sources.

(a) Part 3 of section 6C checks a source with four questions. Name all four. **[1 mark]**

(b) An unsigned, undated social media post claims "Melbourne will run out of rain in ten years". Using the four questions, state which **two** the post fails, and why. **[1 mark]**

(c) The Melbourne Airport rainfall graph in section 6C covers 56 years of measured records. State the wettest year on the graph and its rainfall, and the driest year and its rainfall. **[1 mark]**

Question 30 (6A–6C, VC2HG8S05–VC2HG8S07, drawing on Chapters 1–4) [6 marks]. Cross-chapter question — the end-of-book skill.

Choose **one** issue this book has examined from several sides — for example sharing the Murray–Darling’s water in a drying climate (sections 1A, 1C, 1D and 6A) or the growth of Australia’s cities (sections 4A–4E and 6A). Write one answer of about 200–250 words that does all five of the following.

- (a)** State one geographical question about the issue, and name one figure, table or case study from Chapters 1–4 that gives evidence on it. **[1 mark]**
- (b)** Describe what that evidence shows, organised through **one** of the seven geographical concepts, named (place, space, environment, interconnection, sustainability, scale or change). **[2 marks]**
- (c)** Draw a conclusion from your evidence, then test it against **one** piece of evidence that points the other way (the testing move from section 6A). **[1 mark]**
- (d)** Propose one strategy for action on the issue, judge it against **one** of the three tests from section 6B, and name one potential unintended impact to watch for. **[1 mark]**
- (e)** Name the form from section 6C you would use to communicate your findings (fieldwork report, evidence-based explanation, editorial or documentary), name its audience, and explain in one sentence why the form fits that audience. **[1 mark]**

End of paper — total 93 marks. The marking guide and fully-worked solutions are in the pages that follow.

Marking guide

This guide is for the end-of-level review paper in the pages before it. Marks are point-based: each [N mark] point is earned on its own, and no part earns half marks.

How to mark

- **Accept the same idea in different words.** The model answers below quote the book's own definitions; a student who gives the same meaning in their own words earns the mark. Bold terms must be named or clearly described.
- **Accept the section's printed values.** The paper is open-book, and every data item points to a figure, table or case study the student can turn to. Accept values as the referenced section prints them, and accept sensible rounding of them.
- **Shared-error marking.** If a student carries a wrong value into a later step but the method is right, award the later mark — penalise an error once.
- **Reasoning, not conclusions.** On items where reasonable people disagree — including Question 30 — marks go to the quality of the reasoning: evidence used, concepts named, the other side tested. Two students who reach opposite conclusions can both earn full marks.
- **Where a section of the book prints no answer key of its own,** the model answer here is built from that section's own prose, figures and tables, and should be accepted as the standard.

Marks at a glance

Question	Section	Content description	Marks
1	1A	VC2HG8K01	3
2	1B	VC2HG8K02	3
3	1C	VC2HG8K03	3
4	1D	VC2HG8K04	3
5	1E	VC2HG8K05	3
6	2A	VC2HG8K06	3
7	2B	VC2HG8K07	3
8	2C	VC2HG8K08	3
9	2D	VC2HG8K09	3
10	2E	VC2HG8K10	3
11	2F	VC2HG8K11	3
12	3A	VC2HG8K12	3
13	3B	VC2HG8K13	3
14	3C	VC2HG8K14	3
15	3D	VC2HG8K15	3
16	3E	VC2HG8K16	3
17	3F	VC2HG8K17	3
18	4A	VC2HG8K18	3
19	4B	VC2HG8K19	3
20	4C	VC2HG8K20	3
21	4D	VC2HG8K21	3
22	4E	VC2HG8K22	3
23	5A	VC2HG8S01	3
24	5B	VC2HG8S02	3
25	5C	VC2HG8S03	3

Question	Section	Content description	Marks
26	5D	VC2HG8S04	3
27	6A	VC2HG8S05	3
28	6B	VC2HG8S06	3
29	6C	VC2HG8S07	3
30	6A–6C	VC2HG8S05– VC2HG8S07	6
Total			93

Worked Solutions

Answers follow the paper's order. Values are the ones the named section prints; parts marked "any" accept any of the listed items.

Part 1 — Water in the world

Question 1 (1A, VC2HG8K01)

(a) Water is renewable because the water cycle keeps replacing it: evaporation, rain and run-off return the water within a human lifetime. Section 1A's definition — a renewable resource is "replaced by natural processes within a human lifetime — but only if we do not use it faster than it recovers." [1]

(b) (i) Green water — rain held in the soil where plants can use it. (ii) Blue water — the water in rivers, lakes, dams and underground. [1]

(c) The basin covers about one-seventh of Australia's land and its rivers grow about one-third of Australia's food. [1]

Question 2 (1B, VC2HG8K02)

(a) Any three of: environmental, economic, cultural, spiritual, aesthetic. [1]

(b) Before the Scheme, about 100% of the Snowy River's natural flow passed Jindabyne; after it, less than 1% (the Scheme turns about 99% of the flow west through its tunnels). [1] An environmental flow is "water left in a river, or released back into it, to keep the river healthy." [1]

Question 3 (1C, VC2HG8K03)

(a) Run-off is about 56 mm — Figure 1 prints it, and Demonstration 1 shows the bookkeeping: $426 - 368 - 2$ (held in soil) = 56 mm. The share is $56 \div 426 \approx 0.13$, about 13% of the rain. [1]

(b) $615 - 376 = 239$ gegalitres a year. [1]

(c) Dry catchments act like a sponge: the first rains soak into the dry soil and are used by plants or evaporated, so little reaches the rivers — the dams stay low and recover slowly even after the drought-breaking rain. [1]

Question 4 (1D, VC2HG8K04)

(a) Physical scarcity: there is not enough water at all — the supply itself is short. [1] Economic scarcity: the water exists but cannot be captured or delivered — the pipes, pumps, treatment or money to reach it are missing. [1]

(b) Jordan's roughly 61 cubic metres per person a year sits below the 500 cubic metre line, so Jordan has absolute water scarcity. Yemen, at about 55 cubic metres per person a year, has even less. (Egypt is lower again at about 9, but section 1D counts it as the North African comparison, not one of the West Asian countries.) [1]

Question 5 (1E, VC2HG8K05)

(a) A river flood builds over days or weeks as rain across a wide catchment flows into the river until it spills over the banks; a flash flood arrives in hours, when very heavy rain falls on a small area, with little warning. [1]

(b) Category 3, with wind speeds of about 150 km/h, making landfall near Airlie Beach on 28 March 2017. [1] Evidence that the weakening cyclone still did its greatest harm after landfall (any one): the Pioneer River took more than 1,000 mm of rain in 48 hours as the system moved inland; 14 people died; the damage cost about A\$3.5 billion. [1]

Part 2 — Place and liveability

Question 6 (2A, VC2HG8K06)

- (a) An objective measure is counted or recorded, so different people who check it should get the same answer; a subjective measure reports people's own perceptions — how things seem to them. [1]
- (b) Highest weight: stability (25%) and culture and environment (25%). Lowest: education (10%). [1]
- (c) 5,350,705 people — 76.6% of Victoria's population. [1]

Question 7 (2B, VC2HG8K07)

- (a) Accessibility depends on the person asking: the same place can be easy for one person to reach and hard for another. Two people whose answers would differ (any two): a driver and a 13-year-old on a bike; a parent with a pram; an older person who no longer drives. [1]
- (b) Metropolitan areas: 6.3 GP visits per person. Most remote areas: 3.3. Difference: $6.3 - 3.3 = 3.0$ visits per person a year. [1]
- (c) Australia: 72.9% of people live in major cities. Victoria: 78.4%. [1]

Question 8 (2C, VC2HG8K08)

- (a) Any three of: clean air; clean water; healthy land; low noise; green spaces and wildlife; little litter and waste. [1]
- (b) 30 micrograms per cubic metre falls in the Poor band (25–50). The Good band is any reading below 12.5. [1]
- (c) North metropolitan Melbourne, with 6,355 reports. Brooklyn's particle count is high because of older industrial sites in Melbourne's west (Brooklyn and Geelong South) — pollution left over from earlier decades of industry. [1]

Question 9 (2D, VC2HG8K09)

- (a) Social connectedness is the ties people have to family, friends, groups and community — the links that can be counted or observed. Community identity is the feeling that you belong to a place and its people, and that the place is part of who you are. [1]
- (b) City of Melbourne: 43.1% of households are lone-person. City of Casey: 15.6%. [1]
- (c) The census counts households, not feelings: living alone can be counted, but loneliness must be asked about. Plenty of people who live alone see friends and family every day, so a high lone-person share does not, by itself, show loneliness. [1]

Question 10 (2E, VC2HG8K10)

- (a) Space, environment and interconnection. [1]
- (b) Mallacoota, about 190 km from Bairnsdale Regional Health Service. [1]
- (c) The Hazelwood mine fire at Morwell, which began on 9 February 2014. The 2016 inquiry found the fire harmed people's health — it linked the smoke to 11 people dying earlier than they otherwise would have. [1]

Question 11 (2F, VC2HG8K11)

- (a) A response is an action taken to deal with an issue, or to make something that is already good even better. A response enhances liveability when it makes a place better for the people who live there. [1]
- (b) Glass recycling; food and garden waste; mixed recycling; general rubbish. Batteries and electronics can start fires in collection trucks and at recycling sites, so they go to their own collection points instead. [1]
- (c) Local councils (council level) run kerbside bins and recycling collection; the Victorian Government funds the Safe Pedestrian Program. [1]

Part 3 — Landforms and landscapes

Question 12 (3A, VC2HG8K12)

(a) A landscape is the whole scene you see across a wide area of land; a landform is one single natural feature within it — a cliff, a dune, a peak. [1]

(b) Coastal, riverine, desert, mountain and karst. [1]

(c) Largest: the Great Victoria Desert, about 348,750 km². Smallest: the Pedirka Desert, about 1,250 km². Together the ten deserts cover about 18% of the mainland. [1]

Question 13 (3B, VC2HG8K13)

(a) Spiritual, aesthetic and cultural value. Spiritual value is tied to people's beliefs and what they hold sacred; aesthetic value comes from beauty; cultural value means the place is part of a group's way of life, stories and identity. [1]

(b) Listed in 2013; 3,776 metres high; its pilgrimage tradition dates from at least the 1100s (the 12th century). [1]

(c) More than 2 million visitors a year; more than 60,000 jobs supported; 86% of visits cluster near Cairns, Port Douglas and the Whitsundays. [1]

Question 14 (3C, VC2HG8K14)

(a) Family one builds from inside the Earth, powered by Earth's own heat — folding, faulting or volcanism (any one). Family two works on or near the surface, powered by the Sun and gravity — weathering, erosion or transportation (any one). [1]

(b) Physical weathering breaks rock into smaller pieces of the same rock (freeze-thaw, growing roots). Chemical weathering changes the rock into new substances (acidic rainwater dissolving limestone). [1]

(c) Cave → arch → stack → stump. The energy source driving every step: waves. [1]

Question 15 (3D, VC2HG8K15)

(a) Any three of: farming and grazing; recreation and tourism; mining and quarrying; river regulation; urban development; introduced plants and animals. [1]

(b) Driest year on record: 120 GL (2006–07). Wettest: 7,130 GL (1956–57). Full capacity: 3,005 GL. [1]

(c) A fishway — a channel or lift built at a weir so native fish can pass the wall. Section 3D records about 10,000 barriers to fish movement in the Murray–Darling Basin. [1]

Question 16 (3E, VC2HG8K16)

(a) Prevention, preparedness, response and recovery. [1]

(b) Newcastle 1989: magnitude 5.6, 13 deaths. Mansfield 2021: magnitude 5.9, zero deaths. [1] The Mansfield quake was the stronger of the two, yet killed no one, because impact is set by exposure — who and what stands in the path: Newcastle shook underneath a large working city whose older brick buildings were not built for shaking, while Mansfield's quake shook under forest and farmland, and modern buildings swayed rather than broke. [1]

Question 17 (3F, VC2HG8K17)

(a) Interconnection: the ways people, places and environments are linked, so that what happens in one place can cause things to happen in another. A cause-and-effect chain: a run of changes where each change causes the next one. [1]

(b) A time shift (the effect arrives later), a place shift (the effect lands somewhere else) and a scale shift (the effect happens at a different scale). [1]

(c) The Darling River at Menindee. The investigation's immediate cause: very low oxygen in the water, set up by drought, tiny flows and warm, slow water. Up to one million fish died. [1]

Part 4 — Changing nations

Question 18 (4A, VC2HG8K18)

- (a) Urban growth means the number of people living in urban areas is rising. Urbanisation means the urban share of the population is rising. A country can have urban growth without urbanisation if its country population grows just as fast — the share stays the same. [1]
- (b) The share first passed 50 per cent at the 1920 census (51.2%); by 2020 it stood at 80.0%. [1]
- (c) A push factor is a problem in a place that drives people away from it; a pull factor is a feature of a destination that draws people towards it. [1]

Question 19 (4B, VC2HG8K19)

- (a) Overseas migration +258,100; natural increase +96,300; internal migration –29,800. [1] Total capital-city growth in 2024–25: +324,700 people. (Accept the section’s worked sum of +324,600 — Example 2 explains the 100-person rounding gap.) [1]
- (b) China’s cities are growing by people moving in from the countryside, not by natural increase: the national total fell by 3.39 million, yet urban areas grew by 10.30 million while rural areas shrank by 13.69 million — the urban gain is rural-to-urban migration. [1]

Question 20 (4C, VC2HG8K20)

- (a) Similarity (any one): both dot maps size each dot by population; both countries are highly urbanised; in both, the biggest settlements sit on or near the coast. [1] Difference (any one): Australia’s dots hug the coast and the dry inland carries only a few small dots such as Alice Springs and Kalgoorlie, while the United States has large dots in every region, inland as well as on the coasts; or Australia packs its urban people into a few very large cities, while the United States spreads theirs across many more mid-sized cities. [1]
- (b) Urban concentration. Any one of the six causes in Figure 4C.9: history of European settlement; migration; export orientation of the economy; centralisation of state governments; environmental constraints; shape of transport networks. [1]

Question 21 (4D, VC2HG8K21)

- (a) Any two of: an urban growth boundary; green wedges; activity centres; 20-minute neighbourhoods. [1]
- (b) Average temperature has risen about 1.51 °C since 1910. Cool-season rainfall: south-west Australia down about 16% since 1970 (April–October), or south-east Australia down about 9% since 1994 (April–October). [1]
- (c) The urban heat island is the extra warmth of a city over the countryside around it, caused by dark heat-soaking surfaces, scarce plants and waste heat from machines. Any one remedy: more street trees and tree cover; green roofs; light-coloured surfaces; water features. [1]

Question 22 (4E, VC2HG8K22)

- (a) Space, place, interconnection, change and sustainability. [1]
- (b) Overseas migration — +258 100 people in 2024–25, the biggest flow that added people. [1] It shows interconnection because it joins Australia’s cities to the rest of the world: a flow of people across borders that changes places at both ends of the flow — the cities gain workers, ideas, foods and languages, and feel pressure on homes, roads and schools. [1]

Part 5 — Doing geography: the inquiry toolkit

Question 23 (5A, VC2HG8S01)

- (a) A strong focus question: (1) cannot be answered with one word or one number; (2) points to data you could actually collect; (3) uses at least one of the geographical concepts. [1]
- (b) Immediate causes are the events just before — what happened last (examples from the figure: years of below-average rain; low inflows into the storages). Underlying causes are the slow reasons beneath — why it could happen at all (examples: drought cycles in south-eastern Australia; the drying trend linked to climate change). [1]
- (c) June 2009: 25.5%. 13 December 2024: 88.4%. [1]

Question 24 (5B, VC2HG8S02)

- (a) A primary source is information you collect yourself, first-hand — a street tally, a survey, an interview, your own photograph or field sketch. A secondary source is information someone else collected first — census data, maps, articles, websites. [1]
- (b) The street: 90% separate houses (18 of the 20 dwellings counted). The census for the town: 94.9%. The census is the stronger source for the whole town because the street is a small sample — the street counted 20 homes, while the census counted 2,420 occupied homes — so one street's result cannot prove a pattern for the whole town, even though the close match shows the fieldwork was useful. [1]
- (c) Any two: quote marks — search for an exact phrase; `intitle:` — the key idea must be in the page's title; `site:` — only pages from that website; `filetype:` — only that kind of file; the minus sign — drop pages containing that word. [1]

Question 25 (5C, VC2HG8S03)

- (a) Change over time: line graph. Comparing categories: bar graph. Exact values: table. [1]
- (b) Border, Orientation, Legend, Title, Scale, Source. [1]
- (c) The Heihe–Tengchong Line. East of it live about 94% of China's people, on about 43% of its land. [1]

Question 26 (5D, VC2HG8S04)

- (a) A pattern is how things are arranged in space — clustered, spread evenly, or strung along a line. A trend is how something changes over time — rising, falling or staying level. [1]
- (b) Australia: 87.5% urban (2023). United States of America: 80.1%. The city figures count different things — Melbourne's 5.3 million covers its whole urban area, while New York's 8.6 million counts only the city inside its boundary — so ranking them would compare two different definitions. As the section says, a number without its definition is a trap. [1]
- (c) The inferred relationship: as remoteness increases, access to everyday health services decreases. The caution: moving together is not the same as causes — an inferred relationship is an idea to test (for example, with fieldwork), not a proven cause. [1]

Part 6 — Concluding, deciding and communicating

Question 27 (6A, VC2HG8S05)

- (a) An opinion is a personal view that need not rest on evidence; an evidence-based conclusion is a judgement you reach by reasoning from evidence. [1]
- (b) Space, change, interconnection and environment. [1]
- (c) “Would it still work if everyone did this?” — Immanuel Kant, 1785 (the Groundwork). [1]

Question 28 (6B, VC2HG8S06)

- (a) The environmental test, the economic test and the social test (with other factors). [1]
- (b) Pre-drought use: about 250 litres per person a day. Target 155 goal: 155 litres. Saving: about 95 litres per person a day. [1]
- (c) (i) Individual action; (ii) collective action. Victoria's ban on e-waste going to landfill began on 1 July 2019. [1]

Question 29 (6C, VC2HG8S07)

- (a) Who made it? When was it made? What is it based on? Do other sources agree? [1]
- (b) It fails "Who made it?" — the post is unsigned, so there is no author to check — and "When was it made?" — it is undated, so you cannot tell whether it is current. [1]
- (c) Wettest year: 1978, with 820.8 mm. Driest year: 1997, with 310.2 mm. [1]

Question 30 (6A–6C, VC2HG8S05–VC2HG8S07) — 6 marks

Mark the reasoning steps, not the conclusion reached. Answers will vary; the marks below say what each step must show.

- (a) [1 mark] One clear geographical question about the chosen issue — it cannot be answered with one word or one number — plus one named figure, table or case study from Chapters 1–4 that gives evidence on it.
- (b) [2 marks] The evidence is described accurately, using the named source's own values [1], and the description is organised through one of the seven concepts, named, with the concept actually doing work in the answer (for example, *change*: Melbourne's inflows fell from 615 GL a year (1913–1996) to 376 GL a year in the drought years (1997–2009); or *interconnection*: upstream dams and tunnels on the Snowy changed the river downstream) [1].
- (c) [1 mark] A conclusion stated in evidence-based form ("The evidence shows ... so ..."), then tested against one piece of evidence pointing the other way, with the limit noted — the testing move from section 6A.
- (d) [1 mark] One strategy proposed, judged against one of section 6B's three tests (environmental, economic or social), with one potential unintended impact named — for example, planned environmental releases pass the environmental test because they keep rivers and wetlands alive, but leave less water for irrigation in dry years; or a rainwater tank's open top can breed mosquitoes.
- (e) [1 mark] One form from section 6C named (fieldwork report, evidence-based explanation, editorial or documentary), its audience named, and one sentence explaining why the form fits that audience.

Sample sketch (water issue, about 200 words — a model, not a required answer). *Question:* how is a drying climate changing the share of the Murray–Darling's water that farms, towns and rivers each get? *Evidence:* Figure 5 in section 1C shows Melbourne's inflows falling from 615 GL a year (1913–1996) to 376 GL a year in the drought years (1997–2009); section 6A's worked demonstration records south-east cool-season rainfall down about 9% since 1994. *Through the change lens:* the slow drop in inflows is a trend, not one bad year — the same storages, the same rivers, less water arriving. *Conclusion:* the evidence shows southern rivers are drying, so water sharing needs plans that still work with lower inflows. *Test against the other side:* section 1C also records rain and flows rising in parts of northern Australia since the 1970s — change is uneven, not uniform decline, so the conclusion holds for the south, not the whole country. *Strategy:* planned environmental releases (section 3D), judged against the environmental test — they keep rivers and wetlands alive; unintended impact to watch: less water for irrigation in dry years. *Form:* an evidence-based explanation for my class, because the aim is to show reasoning from evidence, not to win a vote.

Mark total: 93 — Part 1: 15; Part 2: 18; Part 3: 18; Part 4: 15; Part 5: 12; Part 6: 15.

Coverage: every content description this book teaches is assessed at least once — VC2HG8K01 to VC2HG8K22 in Questions 1–22 (one per section), VC2HG8S01 to VC2HG8S04 in Questions 23–26, and VC2HG8S05 to

VC2HG8S07 in Questions 27–29, with Question 30 drawing the skills of sections 6A–6C together over evidence from Chapters 1–4.