

Mathematics Level 7

End-of-level review

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Attribution: Classbasics Pty Ltd, vwx.au

Curriculum codes refer to the *Victorian Curriculum F–10 Version 2.0*, published by the Victorian Curriculum and Assessment Authority (VCAA). Classbasics is not affiliated with the VCAA; the VCAA does not endorse this resource and makes no warranties regarding it.

Distribution note: this document may be distributed, and whole pages may be removed from it, provided only WHOLE pages are removed (never part of a page). This allows teachers to remove tests, exams and subtopics they do not want to issue.

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.

Significant effort has been made to ensure this content is legal. Please send any areas of concern to admin@vwx.au with appropriate document/legal references so errors can be verified and changes be made.

Contents

Section	Page
End-of-level review	2
Review solutions and marking guide — read this first	10

End-of-level review

Geography 4 · Level 4. This paper is the end-of-level review. It looks back at Chapters 1 to 4 of this workbook.

Name: _____ Date: _____

Total marks

60

Questions

19 questions in four parts — one part for each chapter.

Timing

This is a classroom check, not an exam. There is no strict time limit. Plan about 60 to 75 minutes for the whole paper, or do one part per lesson.

What you need

Your Geography 4 workbook (Chapters 1 to 4), a pencil, and this paper. Every question names the section, table, figure or worked example to open. This paper prints no new numbers — read them from your workbook.

Teacher note. This is a classroom check, not an exam. It looks back at work already taught in Chapters 1 to 4 and adds no new content. No content description is tested here that is not already taught and practised in its own chapter. Every item names the book item it draws on, so each student needs the workbook chapters at hand. Any item may be read aloud by the teacher. The marking guide and the worked answers are at the back of this booklet.

*This paper has 19 questions worth **60 marks** in total. Attempt every question. Write your answers on the ruled lines. Where a question says to use a table, figure or worked example, open that item in your workbook and read from it.*

Part 1 — People, place and environment

From Chapter 1, sections 1A to 1D. Five questions, 15 marks.

Q1. Section 1A tells how Melbourne's water travels from the forested hills to the tap. (3 marks)

- (a) Section 1A says the environment does two jobs for us: it is where our resources come from, and it is where our waste goes. Write the book's word for each job. (1 mark)

- (b) Open the map of Melbourne's water stores in section 1A. Using the map, write which direction you would travel from Melbourne to reach (i) the Thomson Reservoir and (ii) the Greenvale store. (2 marks)

Q2. Section 1B looks at the activities of a place and why they are located where they are. (3 marks)

- (a) Section 1B names six types of activity. Write three of them. (1 mark)

- (b) Open the SPC source card in section 1B. Using the card, give one reason the factory sits close to the orchards near Shepparton, and one way the canned fruit reaches shops in other places. (2 marks)

Q3. Section 1C names the five main types of natural vegetation, and section 1D maps them across Australia. (3 marks)

- (a) Write three of the five main types of natural vegetation. (1 mark)

- (b) Using the map of Australia in section 1D, write which type of vegetation grows (i) in the north, near the Top End, and (ii) along the east coast and in the south-east. (2 marks)

Q4. Section 1D explains that in Australia the sun sits in the northern part of the sky, so the two sides of a hill are not the same. (3 marks)

- (a) Which is hotter and drier: a slope that faces north, or a slope that faces south? (1 mark)

- (b) Using the same idea, explain why the plants on a south-facing slope can grow taller than the plants on a north-facing slope. (2 marks)

Q5. Section 1A works with big water numbers. (3 marks)

- (a) The chart in section 1A compares the Thomson Reservoir with the other nine water stores together. Using the chart, write which holds more water. (1 mark)

- (b) A question in section 1A works out about how many days the Thomson Reservoir could supply Melbourne on its own. Using that answer, explain why people in Melbourne still need to save water, even though the stores look very big. (2 marks)

Part 2 — The world stage: continents, climates, vegetation and sustainability

From Chapter 2, sections 2A to 2E. Five questions, 15 marks.

Q6. Section 2A is about continents, oceans and lines on the globe. (3 marks)

(a) Write the biggest continent and the biggest ocean. (1 mark)

(b) Using the continent-areas chart and its worked example in section 2A, write about how many Australias would fit inside Asia. (1 mark)

(c) Name the line of latitude that crosses Western Australia, the Northern Territory and Queensland. (1 mark)

Q7. This question uses section 2A and section 2D. (3 marks)

(a) Section 2A puts every place in a zone and a hemisphere. Write the zone and the hemisphere for Melbourne. (1 mark)

(b) The projection table in section 2A compares map projections. Using the table, write which projection is better for a classroom world map, and one reason why. (1 mark)

(c) Section 2D sorts the features of a place into three kinds. In the worked example in section 2D, what kind of feature is (i) the Yarra River and (ii) the West Gate Bridge? (1 mark)

Q8. Section 2B is about weather and climate. (3 marks)

(a) Section 2B tells the difference between weather and climate. Finish each sentence: Weather is _____. Climate is _____. (1 mark)

(b) Open the monthly table for Melbourne Airport in section 2B. Using the table, write (i) the hottest month, (ii) the coldest month and (iii) the total rainfall for the year. (2 marks)

Q9. Section 2C lays climate bands over vegetation bands. (3 marks)

(a) Using the overlay in section 2C, write what kind of vegetation grows (i) in the equatorial climate and (ii) in the arid climate. (1 mark)

(b) Mount Buller and Melbourne sit at almost the same latitude, but Mount Buller is about 1700 metres above sea level. Section 2C gives a rule for how the air cools as it climbs. Using the rule and the Mount Buller worked example, explain why Mount Buller is about 11 °C cooler than Melbourne. (2 marks)

Q10. Section 2E is about sustainability. (3 marks)

- (a) Section 2E sorts resources into renewable and non-renewable. Sort these four: sunlight · coal · timber from forests people replant · natural gas. (2 marks)

- (b) Section 2E gives two ways Victoria can stretch its water: Way 1 (Target 150) and Way 2 (recycled water). Using either way, write one thing people can do. (1 mark)

Part 3 — Skills: geographical inquiry

From Chapter 3, sections 3A to 3C. Four questions, 12 marks.

Q11. Section 3A teaches how to ask good geographical questions. (3 marks)

(a) Section 3A gives four checks for a good geographical question. Write two of them. (1 mark)

(b) “Is the MCG close to a train station?” is a closed question. Rewrite it as an open question that starts with Why or How. (1 mark)

(c) The inquiry path in section 3A has five steps. Write them in order. (1 mark)

Q12. Section 3B is about sources — the places information comes from. (3 marks)

(a) Section 3B sorts sources into two families: the ones you GO and collect, and the ones you FIND and use. Name one source from each family. (2 marks)

(b) Your class wants to know how many times each bin in the school yard fills up in a week. Section 3B names tools for collecting: look and listen, tally, photos, survey and interview. Pick the tool that fits best, and say why. (1 mark)

Q13. Section 3B also teaches how to record what you find. (3 marks)

(a) What is the difference between a survey and an interview, the way section 3B uses the words? (1 mark)

(b) Section 3B shows how to draw a sketch map. Write three things every sketch map needs. (2 marks)

Q14. Section 3C is about showing and reading data. (3 marks)

(a) Section 3C names formats for showing data: table, column graph, bar graph, picture graph, line graph, thematic map and climate graph. Pick the best format for each job: (i) showing the exact rainfall numbers of seven places; (ii) showing how the amount of litter picked up changed week by week. (2 marks)

(b) The clean-up line graph in section 3C shows the litter picked up over six weeks. Using the graph, describe the trend in one sentence. (1 mark)

Part 4 — Skills: concluding, deciding and communicating

From Chapter 4, sections 4A to 4C. Four questions (Q15 to Q18) and one cross-chapter question (Q19), 18 marks. Q19 also draws on Chapters 1 to 3.

Q15. Section 4A names geography’s three big concepts. (3 marks)

- (a) Write the three concepts. (1 mark)

- (b) Sort each idea to space, interconnection or environment: (i) how far Geelong is from Melbourne; (ii) Australia sending wheat to Indonesia; (iii) caring for the land, water, air, plants and animals. (2 marks)

Q16. Section 4A teaches how to reach a conclusion from evidence. (3 marks)

- (a) Section 4A says “Darwin gets lots of rain” is evidence, not a conclusion. In one sentence each, say what evidence is and what a conclusion is. (1 mark)

- (b) Open the three-place table in Example 1 of section 4A (Darwin Airport, Alice Springs Airport and Melbourne Airport). Using two places from the table, write one conclusion about how climate helps decide what grows in Australia. Start with “I conclude that ... because ...”. (2 marks)

Q17. Section 4B teaches how to decide on an issue. (3 marks)

- (a) The six decision steps of section 4B are mixed up below. Write them in the right order, 1 to 6: Check the impacts · Do it and check · Find the facts · Decide and plan · Find the issue · List the actions. (2 marks)

- (b) Section 4B talks about the probable future and the preferred future. In one sentence, say the difference between them. (1 mark)

Q18. This question uses sections 4B and 4C. (3 marks)

- (a) Example 1 of section 4B checks three actions against the school lunch-waste issue, with an impact for each. Pick one action from that example and write the impact your class would have to manage. (1 mark)

- (b) Section 4C builds a relative-location sentence from a compass direction and a distance. Following the model in Worked example 1 of section 4C, write one sentence for Bendigo, Ballarat or Mornington, using the distances given in practice question Q5 of section 4C. *(1 mark)*

- (c) The practice climate table in section 4C gives the rain, the hot days and the cool nights of Darwin, Alice Springs and Melbourne. Using the table, write which place gets the most rain, and show with a number sentence about how much more rain it gets than the driest of the three. *(1 mark)*

Q19. This question joins ideas from all four chapters. Open Example 2 of section 4B, which tells the story of the Leadbeater’s possum — Victoria’s animal emblem — and its mountain ash forest home. Answer each part in the ruled space. *(6 marks)*

- (a) Use the question checks of section 3A. Write one open geographical question about the possum and its forest home, and name one check it passes. *(1 mark)*

- (b) Use the map in Example 2 of section 4B and the relative-location method of section 4C. Write where the mountain ash forests are, with a compass direction from Melbourne. *(1 mark)*

- (c) Section 1A says the environment is both a source and a sink. Write one way the forest works as a source for people, and one way cutting it down hurt the possum. *(2 marks)*

- (d) Use facts from Example 2 of section 4B. Write a conclusion about why the possum is endangered. Start with “I conclude that ... because ...”. *(1 mark)*

- (e) Use the six decision steps of section 4B. Name one action that helps the possum (you may use one from the example), and one impact your plan would have to manage. *(1 mark)*

End of paper — 19 questions, 60 marks. The marking guide and the worked answers are at the back of this booklet.

Review solutions and marking guide — read this first

Geography 4 · Level 4 · End-of-level review. Marking guide and fully-worked solutions for the 19-question, 60-mark paper at the front of this booklet.

What this paper is

- A school-designed classroom check for Geography Level 4. It is not an exam and it is not set by the Victorian Curriculum and Assessment Authority.
- It looks back at everything in Chapters 1 to 4 of this workbook and adds no new content.
- Students use their workbook while they sit it. Every question names the section, table, figure, worked example or source card to open, and the paper prints no data of its own. Where a solution below gives a number, that number is the reading from the named book item, which keeps its own source line in its section.

How to mark it

- **Point-based.** Award the marks printed on each item; there are no half marks. Part totals: Part 1 = 15, Part 2 = 15, Part 3 = 12, Part 4 = 18. Paper = 60.
- **Same idea, different words.** The answers below are models. Accept any response that shows the same geographical idea, in the student's own words.
- **Readings.** Accept any reading that matches the named table, figure or chart in the student's workbook, including rounded forms (for example "about 6" for 5.8).
- **Carry-through.** If a student reads a value wrong in an early part but uses that value correctly in a later part, award the later marks.
- **Questions whose answers will not all be the same** (Q11(b), Q12(b), Q16(b), Q18(a), Q19(a), Q19(c)–(e)): award the mark when the response meets the check printed in the solution.
- **Spelling.** Do not take marks off for spelling. This is a geography check, not a spelling check. Accept any spelling that sounds like the right word.

Answers at a glance

Q	Marks	Answer in one line
1	3	(a) source; sink (b) (i) east (ii) north-west

Q	Marks	Answer in one line
2	3	(a) any three of retail, recreation, manufacturing, farming, education, commercial (b) close to the orchards so the fruit stays fresh; by road and rail
3	3	(a) any three of forest, woodland, savannah, grassland, desert (b) (i) savannah (ii) forest
4	3	(a) north-facing (b) south-facing slopes are cooler and wetter, so plants grow taller
5	3	(a) the Thomson on its own (b) about 854 days is only about two and a bit years; the stores can run down
6	3	(a) Asia; Pacific Ocean (b) about 6 (c) the Tropic of Capricorn
7	3	(a) temperate zone; Southern Hemisphere (b) Robinson — sizes and shapes are closer to true for the whole world (c) (i) natural (ii) constructed
8	3	(a) weather = right now; climate = the pattern over about 30 years (b) (i) January or February (ii) July (iii) 536.2 mm
9	3	(a) (i) rainforest (ii) desert plants (b) about 1700 m $\times$ the 6.5 °C-per-1000 m rule $\approx$ 11 °C
10	3	(a) renewable: sunlight, replanted timber; non-renewable: coal, natural gas (b) any one way from Target 150 or recycled water
11	3	(a) any two of the four checks (b) e.g. “Why is the MCG close to two train stations?” (c) Notice $\rightarrow$ Wonder $\rightarrow$ Ask $\rightarrow$ Improve $\rightarrow$ Plan
12	3	(a) one collect tool + one found source (b) tally — it counts repeated events
13	3	(a) survey = same question, many people; interview = one person (b) any three of symbols, key, title, north point
14	3	(a) (i) table (ii) line graph (b) downward trend — less litter each week
15	3	(a) space, interconnection, environment (b) (i) space (ii) interconnection (iii) environment

Q	Marks	Answer in one line
16	3	(a) evidence = a fact you can check; conclusion = what you decide from the evidence (b) model conclusion from two places in the table
17	3	(a) Find the issue → Find the facts → List the actions → Check the impacts → Decide and plan → Do it and check (b) probable = what will likely happen; preferred = what we want to happen
18	3	(a) one action + its impact from Example 1 (b) e.g. "Bendigo is about 150 km north-west of Melbourne." (c) Darwin; $1,733 - 284 = 1,449$ mm
19	6	cross-chapter: question + check; north-east; source/harm; conclusion; action + impact

Solutions — Part 1 — People, place and environment

Q1 (3 marks).

- (a) **Source** — the environment is where our resources (water, food, wood, air) come from — and **sink** — the environment is where our waste goes. Award 1 mark for both words; the student may phrase them as “where things come from” and “where waste goes” as long as the book’s two words are given. *(1 mark)*
- (b) On section 1A’s map of the water stores: (i) the Thomson Reservoir is **east** of Melbourne; (ii) the Greenvale store is **north-west** of Melbourne. Award 1 mark for each direction. *(2 marks)*

Q2 (3 marks).

- (a) Any three of the six types named in section 1B: **retail, recreation, manufacturing, farming, education, commercial**. *(1 mark)*
- (b) From the SPC source card in section 1B. Reason the factory sits close to the orchards: **the fruit has a short trip and stays fresh** (the factory is close to its input — the growers’ fruit). Way the canned fruit reaches shops: **by road and rail**. Award 1 mark for each idea. *(2 marks)*

Q3 (3 marks).

- (a) Any three of the five main types of natural vegetation named in section 1C: **forest, woodland, savannah, grassland, desert**. *(1 mark)*
- (b) From the map of Australia in section 1D: (i) the north near the Top End grows **savannah**; (ii) the east coast and the south-east grow **forest**. Award 1 mark for each. *(2 marks)*

Q4 (3 marks).

- (a) A slope that faces **north**. In Australia the sun sits in the northern part of the sky, so north-facing slopes get the most direct sun. *(1 mark)*
- (b) Model answer: a south-facing slope gets less direct sun, so it is **cooler** and **wetter** — less water dries up there. With more water, the plants can grow **taller**. A north-facing slope is hotter and drier, so only tougher, lower plants live there. Award 1 mark for the cooler-and-wetter idea and 1 mark for linking it to taller plants. *(2 marks)*

Q5 (3 marks).

- (a) **The Thomson Reservoir on its own**. The chart in section 1A shows the Thomson holds more water than the other nine stores put together. *(1 mark)*
- (b) Model answer: section 1A’s working shows the Thomson alone could supply Melbourne for about **854 days** — a little over two years. The stores look very big, but the city uses water every day, and if the rain stops the stores run down. Saving water makes the supply last longer until the rain fills the stores again. Award 1 mark for using the book’s days answer and 1 mark for the run-down reasoning. *(2 marks)*

Solutions — Part 2 — The world stage: continents, climates, vegetation and sustainability

Q6 (3 marks).

- (a) Biggest continent: **Asia**. Biggest ocean: the **Pacific Ocean**. Both from section 2A's size charts. Award 1 mark only if both are correct. (1 mark)
- (b) **About 6**. Section 2A's worked example divides Asia's area by Australia's area (about $44.6 \div 7.7 \approx 5.8$). Accept "about 6" or "nearly 6". (1 mark)
- (c) The **Tropic of Capricorn** — the line of latitude that section 2A's map of Australia shows crossing Western Australia, the Northern Territory and Queensland. (1 mark)

Q7 (3 marks).

- (a) Zone: the **temperate zone**. Hemisphere: the **Southern Hemisphere**. Both from section 2A's worked example for Melbourne. Award 1 mark only if both are correct. (1 mark)
- (b) **Robinson**. Reason from section 2A's projection table: Robinson is drawn for world maps that show the whole world with sizes and shapes closer to true, which is what a classroom map needs; the Mercator projection makes lands near the poles look too big. Accept either reason. (1 mark)
- (c) From the worked example in section 2D: (i) the Yarra River is **natural**, and (ii) the West Gate Bridge is **constructed**. Award 1 mark only if both are correct. (1 mark)

Q8 (3 marks).

- (a) Weather is **what the sky is doing right now** — hot or cool, wet or dry — and it changes from hour to hour. Climate is **the pattern of weather in a place, added up over many years** — section 2B says scientists use about **30 years** of records. Award 1 mark for both halves. (1 mark)
- (b) From section 2B's monthly table for Melbourne Airport: (i) hottest month — **January** (February is the same, 26.7 °C; accept either or both); (ii) coldest month — **July** (13.2 °C); (iii) total rainfall for the year — **536.2 mm**. Award 1 mark for both months and 1 mark for the total. (2 marks)

Q9 (3 marks).

- (a) From section 2C's overlay of climate bands on vegetation bands: (i) the equatorial climate grows **rainforest** (at the tip of Cape York); (ii) the arid climate grows **desert plants** (in the middle of Australia). Award 1 mark only if both are correct. (1 mark)
- (b) Model answer: Mount Buller is about **1700 m** higher than Melbourne, and section 2C's rule says the air cools about **6.5 °C for every 1000 m** of height. About $1.7 \times 6.5 \approx 11$ °C — which matches the worked example, where the two stations differ by $20.5 - 9.4 = 11.1$ °C. Award 1 mark for using the height with the rule and 1 mark for the ≈ 11 °C result (accept "about 11"). (2 marks)

Q10 (3 marks).

- (a) **Renewable**: sunlight; timber from forests people replant. **Non-renewable**: coal; natural gas. Award 1 mark for each correct pair; the replanted-forest timber counts as renewable because section 2E's Victorian timber example says plantations are replanted after they are cut. (2 marks)
- (b) Any one way from section 2E. Way 1 (Target 150): **use less water each day** — shorter showers, turning off taps — to bring the average down towards 150 litres per person per day. Way 2 (recycled water): **use recycled water for jobs that do not need drinking water** — Class A water for flushing toilets and watering gardens, or Class C water for food crops and sports ovals. (1 mark)

Solutions — Part 3 — Skills: geographical inquiry

Q11 (3 marks).

- (a) Any two of the four checks in section 3A: it is **about a place**; it **starts with Why, Where or How**; it is **open**, not yes-or-no; **the answer can be found**. (1 mark)
- (b) Answers will not all be the same. Check: starts with Why or How, cannot be answered yes-or-no, is about a place, and the answer can be found. Model: “**Why is the MCG close to two train stations?**” (section 3A’s own rewrite). (1 mark)
- (c) **Notice → Wonder → Ask → Improve → Plan** — the five steps of section 3A’s inquiry path. Award the mark for all five in order. (1 mark)

Q12 (3 marks).

- (a) One from each family of section 3B. GO and collect: **tally, photos, survey, interview, look and listen** (any one). FIND and use: **maps, photographs, satellite images, graphs, tables, books or safe websites** (any one). Award 1 mark for each family. (2 marks)
- (b) Answers will not all be the same, but the tool that fits best is a **tally** — counting how many times each bin fills is counting repeated events, and section 3B shows a tally table keeping marks for each event, with every fifth mark crossed. Award the mark for tally plus a counting reason; a survey with a sensible counting plan may earn the mark if the reasoning is sound. (1 mark)

Q13 (3 marks).

- (a) A **survey** asks the **same question to many people**; an **interview** asks questions to **one person**. Both halves needed for the mark. (1 mark)
- (b) Any three of the four things section 3B says every sketch map needs: **symbols, a key, a title, a north point**. (2 marks — 1 for two, 2 for three)

Q14 (3 marks).

- (a)
 - (i) A **table** — section 3C says a table is the format for exact numbers; (ii) a **line graph** — section 3C says a line graph shows change over time. Award 1 mark for each. (2 marks)
- (b) The trend is **downward**: the amount of litter picked up gets smaller each week, from 32 items in Week 1 to 15 items in Week 6 on section 3C’s clean-up line graph. Accept any sentence that says the amount falls over the six weeks; the two readings are not required for the mark. (1 mark)

Solutions — Part 4 — Skills: concluding, deciding and communicating

Q15 (3 marks).

- (a) **Space, interconnection, environment** — the three big concepts of section 4A. Award the mark for all three. (1 mark)
- (b)
- (i) How far Geelong is from Melbourne → **space** (where things are and how far it is from one place to another). (ii) Australia sending wheat to Indonesia → **interconnection** (places joined by goods that move). (iii) Caring for the land, water, air, plants and animals → **environment**. Award 1 mark for two correct sorts and 1 mark for all three. (2 marks)

Q16 (3 marks).

- (a) **Evidence** is a fact you can check — a number, a reading, something you observed (like “Darwin gets lots of rain”). A **conclusion** is what you decide after you look at the evidence and think with the concepts; it answers the question and says why. Award 1 mark for both halves. (1 mark)
- (b) Answers will not all be the same. Check: starts “I conclude that ... because ...”, names two places from section 4A’s three-place table, and the because-part uses the table’s climate and vegetation readings. Model: **“I conclude that in Australia, climate helps decide what grows where, because Darwin Airport is wet and warm and its land grows savannah, while Alice Springs Airport is dry and its land grows only desert plants like spinifex.”** Award 1 mark for a conclusion in the right form with two places and 1 mark for the because-part using the table’s readings. (2 marks)

Q17 (3 marks).

- (a) The six decision steps of section 4B, in order: **1 Find the issue · 2 Find the facts · 3 List the actions · 4 Check the impacts · 5 Decide and plan · 6 Do it and check**. Award 1 mark for a run of four or more in the right places and the second mark for all six. (2 marks)
- (b) The **probable future** is what will probably happen if nothing changes; the **preferred future** is what we would like to happen — the future our actions aim for. Award 1 mark for both halves (section 4B’s futures diagram shows the two paths). (1 mark)

Q18 (3 marks).

- (a) Answers will not all be the same. Check: the action is one of the three in section 4B’s Example 1 impacts table, and the impact is the one the table pairs with it. Models: **metal cutlery** → someone has to wash it every day; **a bottle collection spot** → students must sort the bottles and keep the spot tidy; **a compost bin** → someone has to turn the bin. (1 mark)
- (b) Following section 4C’s Worked example 1 model (“Geelong is about 75 km south-west of Melbourne”), any one of: **“Bendigo is about 150 km north-west of Melbourne.” · “Ballarat is about 110 km north-west of Melbourne.” · “Mornington is about 46 km south-east of Melbourne.”** Check: names both places, gives the compass direction and gives the distance. (1 mark)
- (c) **Darwin** gets the most rain. Number sentence: $1,733 - 284 = 1,449$, so Darwin gets about 1,449 mm more rain in a year than Alice Springs, the driest of the three (readings from section 4C’s practice climate table; accept rounded forms such as $1,730 - 280 = 1,450$). (1 mark)

Q19 (6 marks). Cross-chapter question. All the facts are in Example 2 of section 4B (the Leadbeater’s possum, Victoria’s animal emblem, and its mountain ash forest home in the Central Highlands).

- (a) Answers will not all be the same. Check: the question is open (not yes-or-no), is about the possum or its forest home, and starts with Why, Where or How; the student names one of section 3A’s four checks that it passes. Model: **“Why is the Leadbeater’s possum endangered?”** — it passes all four checks: about a place and its animal, starts with Why, open, and the answer can be found. (1 mark)
- (b) The mountain ash forests are in the Central Highlands, **north-east of Melbourne** (from the map in Example 2 of section 4B, phrased the section 4C way — a compass direction from Melbourne). Award the mark for north-east with Melbourne named. (1 mark)
- (c) Answers will not all be the same. Source (any one): the forest gives people **timber** (the mountain ash that was logged), and, as section 1A teaches, forests also supply **clean water** and **fresh air**. Harm (any one): **logging took away the possum’s habitat** — the trees it nests in — and the February 2009 bushfires burnt much of what was left, so the possum lost its home and its numbers went down. Award 1 mark for a source idea and 1 mark for a harm idea. (2 marks)
- (d) Answers will not all be the same. Check: starts “I conclude that ... because ...”, and the because-part uses facts from Example 2 of section 4B. Model: **“I conclude that the Leadbeater’s possum is endangered because its mountain ash forest home was cut down for timber and burnt in the 2009 bushfires, so too few nesting trees are left for the possums to live in.”** (1 mark)
- (e) Answers will not all be the same. Check: one action that helps (the example offers **nest boxes** to give the possums homes while the forest grows back, and the end of logging in Victoria’s native forests on 1 January 2024 protects the habitat that is left), plus one impact the plan must manage — for example, nest boxes need **people, time and money** to build, put up and check (section 4B’s resources), and when logging ended, **workers needed retraining** for new jobs. Award the mark for a sensible action plus a managed impact. (1 mark)

End of solutions — 60 marks.

Mark summary and curriculum map (teacher-facing)

Q	Part	Marks	CD(s)	Book items the question refers to
1	1	3	VC2HG4K01	1A source-and-sink definitions; map of Melbourne’s water stores
2	1	3	VC2HG4K02	1B six activity types; SPC Shepparton source card
3	1	3	VC2HG4K03, VC2HG4K04	1C five vegetation types; 1D map of Australia
4	1	3	VC2HG4K04	1D sun-in-the-north, north- and south-facing slopes
5	1	3	VC2HG4K01	1A Thomson-vs-nine chart; days-of-supply working (Q3e)
6	2	3	VC2HG4K05	2A continent/ocean size charts;

Q	Part	Marks	CD(s)	Book items the question refers to
7	2	3	VC2HG4K05, VC2HG4K08	“Australias in Asia” worked example; Australia lines map 2A zone/hemisphere worked example; projection table; 2D feature-sort worked example
8	2	3	VC2HG4K06	2B weather-vs- climate; Melbourne Airport monthly table + worked example
9	2	3	VC2HG4K07	2C climate- vegetation overlay; elevation rule + Mount Buller worked example
10	2	3	VC2HG4K09	2E renewable/non- renewable sort; Way 1 Target 150; Way 2 recycled water
11	3	3	VC2HG4S01	3A four checks; closed→open MCG rewrite; inquiry path figure
12	3	3	VC2HG4S02	3B two source families; collecting tools incl. tally table
13	3	3	VC2HG4S02	3B survey-vs- interview; sketch- map needs
14	3	3	VC2HG4S03	3C data formats; clean-up line graph
15	4	3	VC2HG4S04	4A three concepts; concept-sort models (Geelong distance, wheat to Indonesia, care)
16	4	3	VC2HG4S04	4A evidence-vs- conclusion; Example 1 three- place BOM table; “I conclude that ... because ...” form
17	4	3	VC2HG4S05	4B six decision steps; probable-vs-

Q	Part	Marks	CD(s)	Book items the question refers to
18	4	3	VC2HG4S05, VC2HG4S06	preferred futures 4B Example 1 impacts table; 4C Worked example 1 relative location; 4C practice climate table (Q5 distances, Q3 answers)
19	4	6	VC2HG4S01, S04, S05, S06 over K01–K02 ideas	cross-chapter synthesis on 4B Example 2 (Leadbeater's possum): 3A checks, 4C relative location, 1A source-and-sink, 4A conclusion form, 4B decision steps/resources

Mark totals. K-strand (Chapters 1–2): 30 marks — K01 6, K02 3, K03 1, K04 5, K05 5, K06 3, K07 3, K08 1, K09 3. S-strand (Chapters 3–4): 24 marks — S01 3, S02 6, S03 3, S04 6, S05 4, S06 2. Cross-chapter synthesis: 6 marks (Q19). Paper: 60. All 15 CDs of the Levels 3–4 band are touched; VC2HG4K03 is touched via Q3(a) (the five types 1C owns) and via the synthesis item's environment reasoning.

Sourcing and data note (teacher-facing). This paper is synthetic-data-free by design (review-authoring spec, DJB 05/10): it prints no data and invents none. Every datum a student needs is read from the book item named in the question, and each such item carries its own source line with retrieval date in its owning section (D9). No source line has been copied into a new claim anywhere on the paper or in these solutions. Where a solution quotes a reading (e.g. 536.2 mm, 11.1 °C, 1,449 mm, about 854 days), it restates the reading the named book item already shows.

Policy note (teacher-facing). No per-item level or CD tags are printed on the student paper (D11); the map lives here and in the paper's structure comment. No Aboriginal or Torres Strait Islander content appears (D3, series-wide exclusion — the paper adds no new content, so the section-level exclusions recorded in the book's curriculum traces carry over unchanged). No publisher is named (D4). Vocabulary: student-facing text of both files is at or below the Yr4 ceiling (D2), verified by `_gate_rv.py` with the three standard exemption classes.