Cambridge Assessment International Education

Cambridge O Level

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

3082965259

GEOGRAPHY **2230/02**

Paper 2 Geographical Skills **May/June 2024**

1 hour 45 minutes

You must answer on the question paper.

You will need: Insert (enclosed)
1:25 000 survey map (enclosed)
Calculator
Plain paper
Protractor
Ruler

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- Sketch maps and diagrams should be drawn whenever they serve to illustrate the answer.
- If additional space is needed, you should use the lined pages at the end of this booklet; the question number or numbers must be clearly shown.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].
- The insert contains additional resources referred to in the questions.

This document has **20** pages. Any blank pages are indicated.

Section A: Mapwork skills

1 Study the map extract of Rarotonga, the largest of the Cook Islands in the South Pacific. The scale is 1:25 000. The heights are in metres. The contour interval is 20 metres.

(a) Study Fig. 1.1, which shows some features in the west of the island.

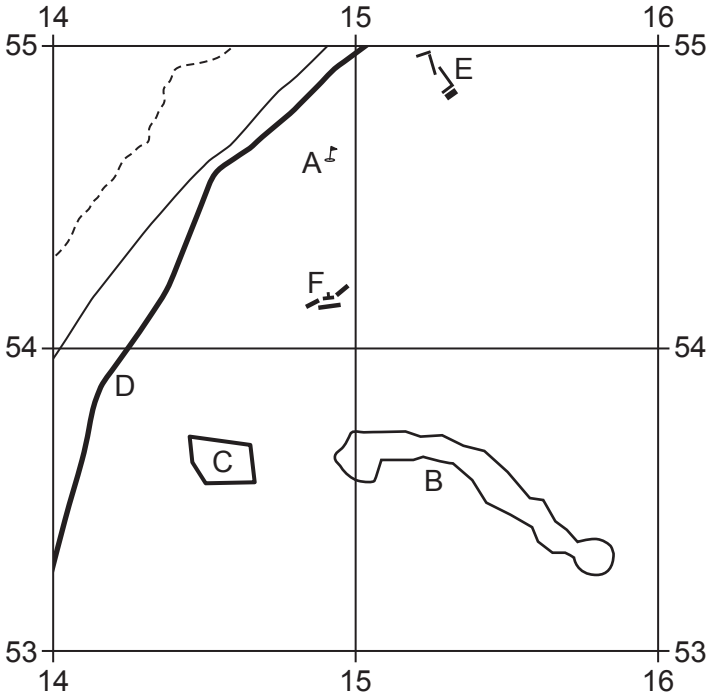

Fig. 1.1

Use the map extract to identify the following shown on Fig. 1.1:

(i) feature A

..... [1]

(ii) area B

..... [1]

(iii) land use at C

..... [1]

(iv) type of road at D

..... [1]

(v) type of building at E

..... [1]

(vi) height of the land where the hospital is built at F.

..... [1]

(b) Study Rarotonga International Airport on the map extract, which is located in the north-west of the island.

(i) Explain why this is a good location for the airport.

.....

.....

.....

..... [2]

(ii) State the distance and general direction of the airport runway.

Distance .....

Direction .....

[2]

(c) **(i)** Identify **two** services found in the settlement of Avarua in grid square 1954.

1 .....

2 .....

[2]

(ii) Study Fig. 1.2 (Insert), which shows a satellite image of Rarotonga.

Use the map extract and satellite image to describe the pattern of settlement.

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..... [3]

(d) Study Fig. 1.3, which shows an area in the east of the map extract.

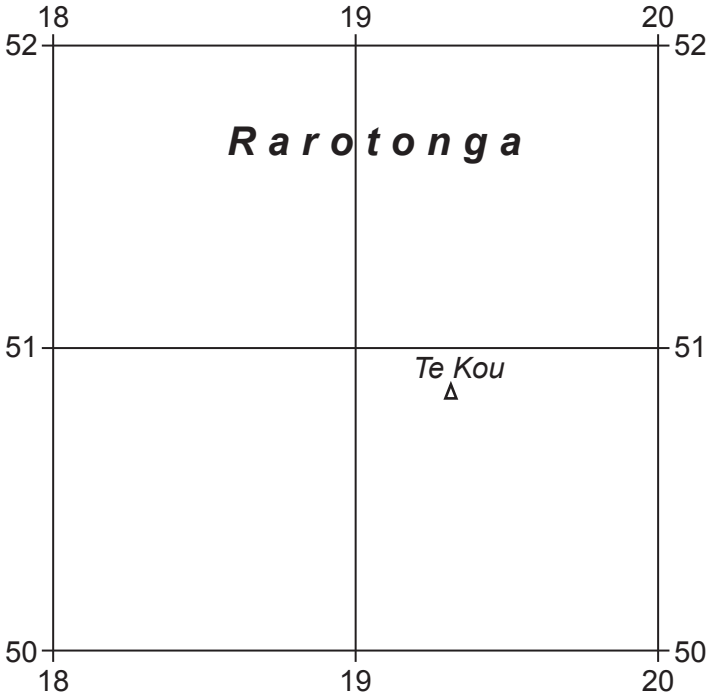

Fig. 1.3

(i) Tick (✓) **three** correct statements to describe the relief and drainage of the area shown in Fig. 1.3.

statements	tick (✓)
There is a lake.	
The rivers have waterfalls and rapids.	
The land rises over 500 m.	
There is a large river.	
There are plateaus.	
There are many steep slopes.	
There is a lot of surface drainage.	
There are many gentle slopes.	

[3]

(ii) **On Fig. 1.3, add the route of the Cross Island Track** in grid squares 1850 and 1851. [1]

(iii) Give a six-figure grid reference for the *Te Kou* mast.

..... [1]

[Total: 20]

Section B: Geographical skills

2 **(a)** Study Fig. 2.1, which shows forest cover in Brunei in 2000 and 2020.

Forest cover in Brunei, 2000 and 2020

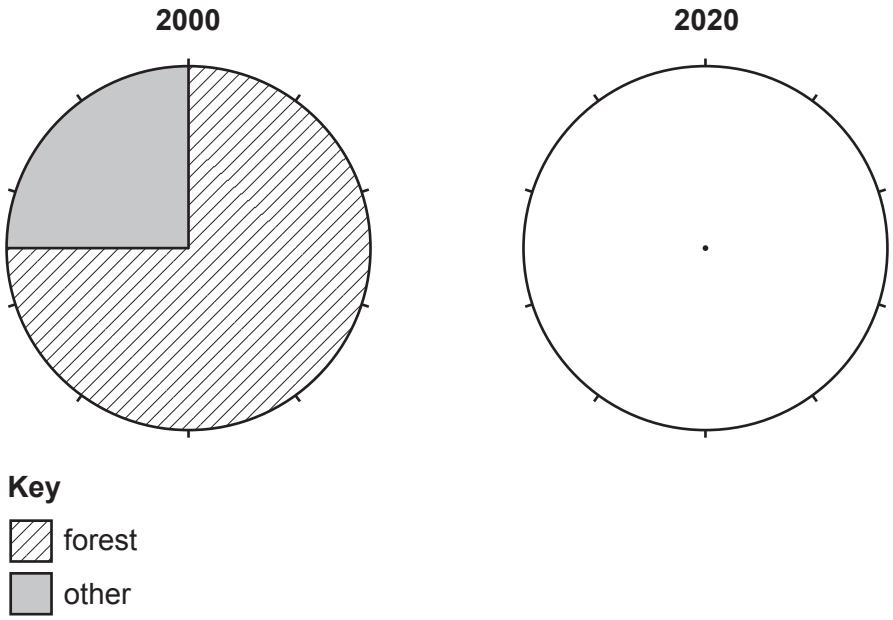

Fig. 2.1

(i) **Complete Fig. 2.1** to show that 72% of Brunei was forest in 2020. [2]

(ii) Calculate the change in forest cover from 2000 to 2020.

..... [1]

(b) Study Fig. 2.2, which shows the amount and causes of tree cover loss in Brunei from 2001 to 2020.

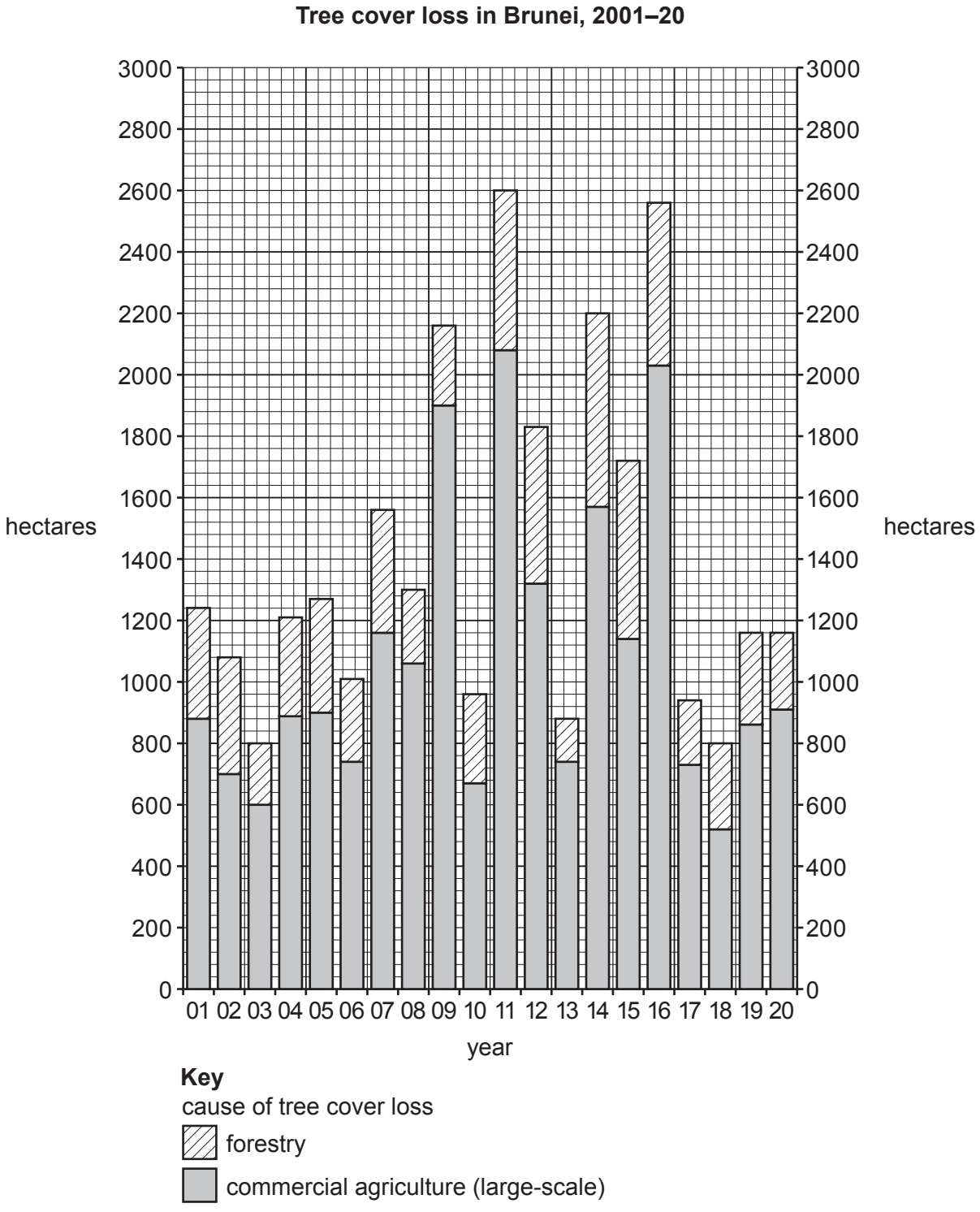

Fig. 2.2

(i) Use Fig. 2.2 to complete the following:

In 2001 ..... hectares of tree cover were lost in Brunei. This amount increased to 2600 hectares in the year ..... . The amount of tree cover loss declined to 1160 hectares in 2020.

[2]

(ii) What is the main cause of tree cover loss shown in Fig. 2.2?

..... [1]

(c) Study Fig. 2.3 (Insert), which shows a satellite image of tree cover loss in Brunei.

Which districts of Brunei have the greatest and least amount of tree cover loss?

Greatest tree cover loss .....

Least tree cover loss .....

[2]

(d) State **two** environmental problems caused by the loss of tree cover.

1 .....

2 .....

[2]

[Total: 10]

[Turn over

3 **(a)** Study Fig. 3.1, which shows world population by continent in 2022.

World population by continent, 2022

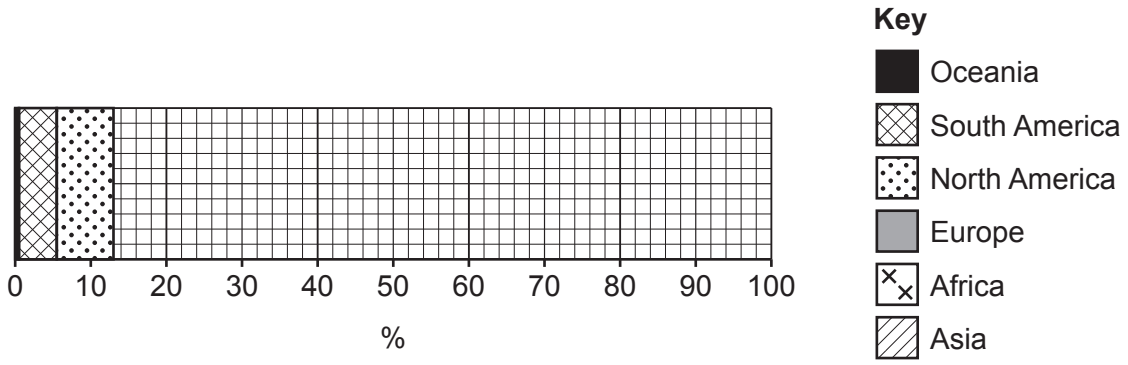

Fig. 3.1

Use the data below to **complete the divided bar graph on Fig. 3.1**. Oceania, South America and North America have been completed for you.

Europe	9%
Africa	18%
Asia	60%

[3]

(b) Study Fig. 3.2 (Insert), which shows the population of continents from 1950 to 2100 (estimated).

(i) Use data from Fig. 3.2 to describe how the population of Asia is expected to change from 1950 to 2100.

.....

.....

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.....

.....

..... [3]

(ii) **Use Fig. 3.2 to complete Table 3.1** by putting the continents in rank order from highest to lowest.

Table 3.1

rank order	1950	2100
1	Asia	.....
2	Europe	.....
3	Africa	.....
4	North America	.....
5	South America	South America
6	Oceania	Oceania

[2]

(iii) Fig. 3.2 shows that the population of Europe started decreasing after 2020.
Suggest **two** problems a declining population could cause for countries.

1 .....

.....

2 .....

.....

[2]

[Total: 10]

Section C: Geographical investigation

4 Students at a school in Sweden did fieldwork to investigate how locations of their city were different from each other. One group of students decided to find out about differences in traffic and the quality of the urban environment.

The students investigated the following hypotheses:

Hypothesis 1: *The amount of traffic decreases as distance from the city centre increases.*

Hypothesis 2: *The quality of the urban environment increases as distance from the city centre increases.*

The students selected 6 different locations in the city to do their fieldwork. These locations are shown in Fig. 4.1 (Insert).

(a) To investigate **Hypothesis 1:** *The amount of traffic decreases as distance from the city centre increases*, the students did a traffic survey at each location shown in Fig. 4.1 (Insert).

(i) Describe how the students would carry out the traffic survey.

.....

.....

.....

.....

.....

.....

.....

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..... [3]

(ii) Give **two** pieces of advice about safety which the students would be given by their teacher before carrying out the traffic survey.

1 .....

.....

2 .....

.....

[2]

(b) The results of the students' traffic survey are shown in Table 4.1 (Insert) and presented in Fig. 4.2 (Insert).

(i) State the **two** locations where the number of bikes is greater than the number of vans / lorries.

..... [1]

(ii) Which **one** of the following data presentation techniques would you choose to show the results of the **total amount** of traffic shown in Table 4.1 (Insert)? **Circle your answer below and explain your choice.**

scatter graph flow lines on a map choropleth shading

Explanation .....

.....

[1]

(iii) Which **one** of the following conclusions is correct for **Hypothesis 1:** *The amount of traffic decreases as distance from the city centre increases*? Use evidence from Table 4.1 (Insert) and Fig. 4.2 (Insert) to support your decision.

conclusion	tick (✓)
Hypothesis 1 is accepted	
Hypothesis 1 is inconclusive	
Hypothesis 1 is rejected	

Evidence to support your decision

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..... [3]

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(c) To investigate **Hypothesis 2:** *The quality of the urban environment increases as distance from the city centre increases*, the students did an Environmental Quality Survey at each of the 6 locations. The recording sheet they used is shown in Fig. 4.3.

Environmental Quality Survey recording sheet

Name of area surveyed:

Date:

Time:

negative evaluation	–3	–2	–1	+1	+2	+3	positive evaluation
roads and pavements in poor state of repair							roads and pavements in good state of repair
noisy and polluted atmosphere							quiet and unpolluted atmosphere
heavily littered							no obvious litter
buildings in a poor state of repair							buildings in a good state of repair
lots of graffiti and evidence of vandalism							free from graffiti and no evidence of vandalism
no street furniture or art							lots of street furniture and art
no greenery/landscaping							lots of greenery/landscaping

Total score:

Fig. 4.3

Suggest **two** ways in which the Environmental Quality Survey should be carried out to make sure that the results are reliable.

1 .....

.....

2 .....

.....

[2]

(d) Study Table 4.2 (Insert), which shows the results of the Environmental Quality Survey.

Describe **one** similarity and **one** difference between Location 1 and Location 4.

Similarity .....

.....

Difference .....

.....

[2]

(e) Fig. 4.4 shows the total environmental quality score for each location.

Graph to show total environmental quality scores

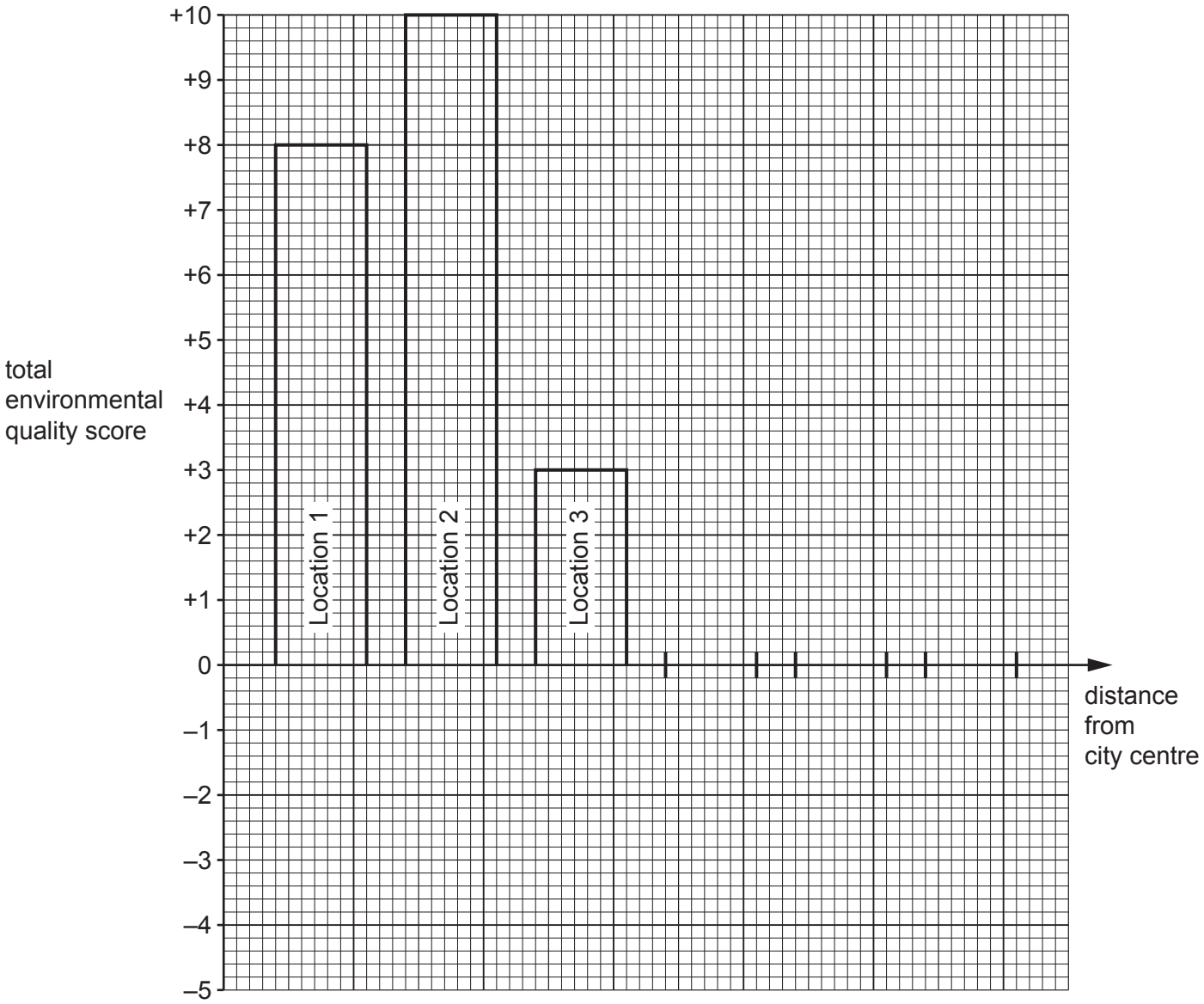

Fig. 4.4

(i) **Complete the graph for locations 4, 5 and 6 on Fig. 4.4** using the results shown in Table 4.2 (Insert). [3]

(ii) What conclusion would the students make for **Hypothesis 2:** *The quality of the urban environment increases as distance from the city centre increases*? Use evidence from Table 4.2 (Insert) and Fig. 4.4 to support your decision.

Conclusion .....

Evidence .....

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[3]

[Total: 20]

Additional pages

If you use the following page(s) to complete the answer(s) to any question(s), the question number(s) must be clearly shown.

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