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Cambridge Assessment International Education

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CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

5609041221

GEOGRAPHY **0460/41**

Paper 4 Alternative to Coursework **May/June 2024**

1 hour 30 minutes

You must answer on the question paper.

You will need: Insert (enclosed) Ruler
Calculator
Protractor

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.
- 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.

Definitions
MEDCs – More Economically Developed Countries
LEDCs – Less Economically Developed Countries

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

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1 Students in Johannesburg, South Africa, were studying weather. As part of their classwork they measured temperature and rainfall at their school over a period of ten days.

(a) To measure temperature, the students used a maximum-minimum thermometer in a Stevenson screen.

(i) Explain why a maximum-minimum thermometer is kept in a Stevenson screen.

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(ii) Name **one** other weather measuring instrument which would be kept in a Stevenson screen.

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(iii) Describe how the students would **use** the maximum-minimum thermometer.

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(b) The students used a traditional rain gauge to measure rainfall.

(i) In the space provided, draw a labelled diagram of a traditional rain gauge. [4]

(ii) Describe a suitable position to put the rain gauge.

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(iii) Explain why this would be a suitable position for the rain gauge.

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..... [2]

(c) The results of the students' temperature and rainfall measurements are shown in Table 1.1 (Insert).

(i) State the difference between the maximum and minimum temperatures on the day with the largest difference.

..... °C [1]

(ii) On which day is most rainfall recorded?

..... [1]

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(d) One student decided to compare temperature and rainfall in Johannesburg and Cape Town in February. The two cities are shown in Fig. 1.1 (Insert). They used data collected and recorded by the South African Weather Service.

(i) What name is given to data collected by someone other than the student themself?

..... [1]

(ii) Suggest **two** advantages of using data collected by the South African Weather Service rather than the student's own data.

1 .....

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2 .....

..... [2]

The student tested the following hypotheses:

Hypothesis 1: *Temperatures in February are higher in Johannesburg than in Cape Town.*

Hypothesis 2: *Rainfall in February is higher in Johannesburg than in Cape Town.*

(e) The data the student used to test **Hypothesis 1** is shown in Table 1.2 (Insert).

(i) Use this data to **complete the maximum temperature line for Cape Town** on 28 February on Fig. 1.2. [1]

(ii) What conclusion did the student make about **Hypothesis 1**: *Temperatures in February are higher in Johannesburg than in Cape Town*?
Support your conclusion with evidence from Fig. 1.2 and Table 1.2.

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Temperatures in Johannesburg and Cape Town

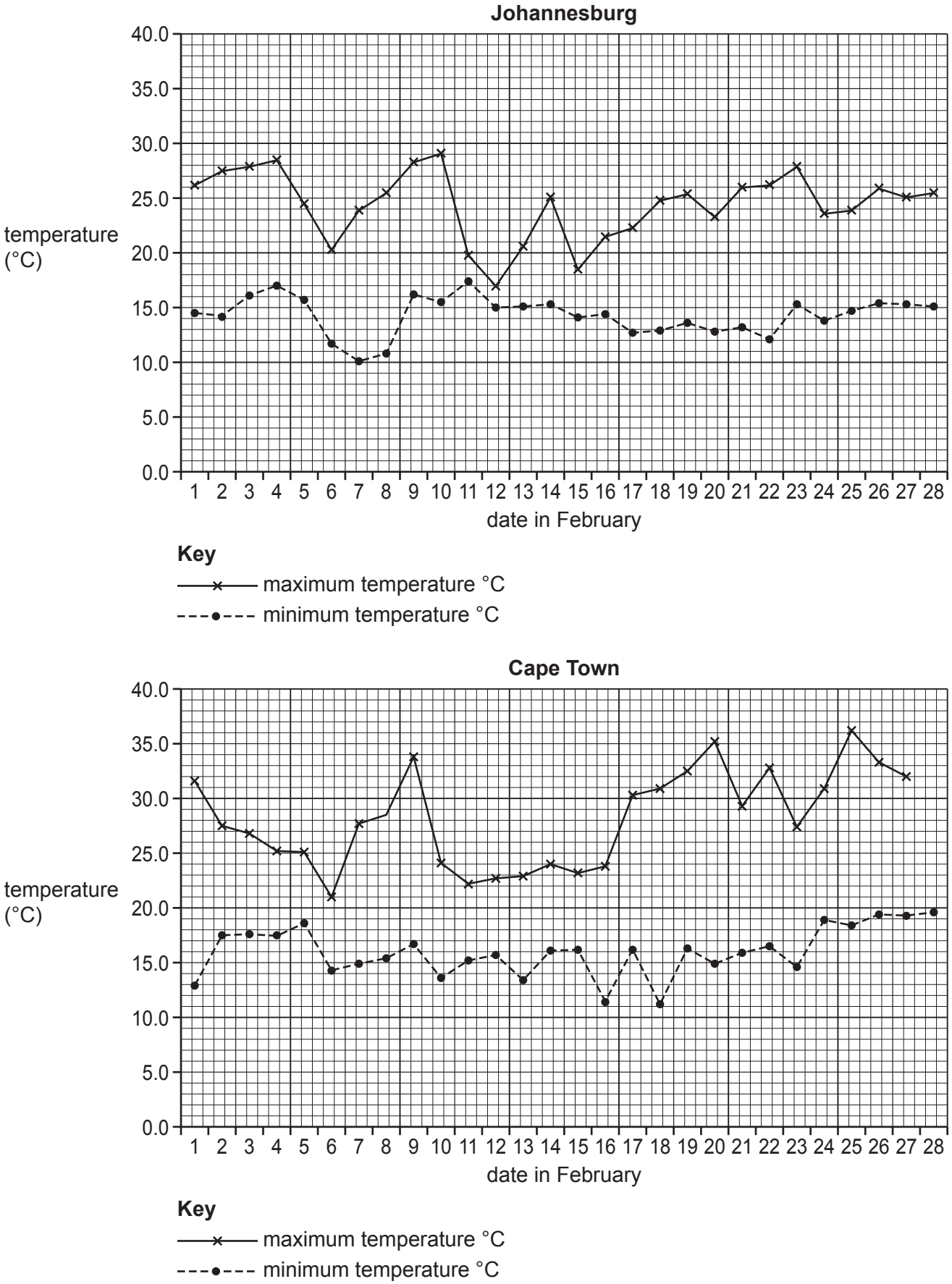

Fig. 1.2

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(f) The data the student used to test **Hypothesis 2**: *Rainfall in February is higher in Johannesburg than in Cape Town* is shown in Table 1.3 (Insert).

(i) Use this data to **plot the rainfall in Johannesburg** for 1 February on Fig. 1.3. [1]

Daily rainfall in Johannesburg and Cape Town

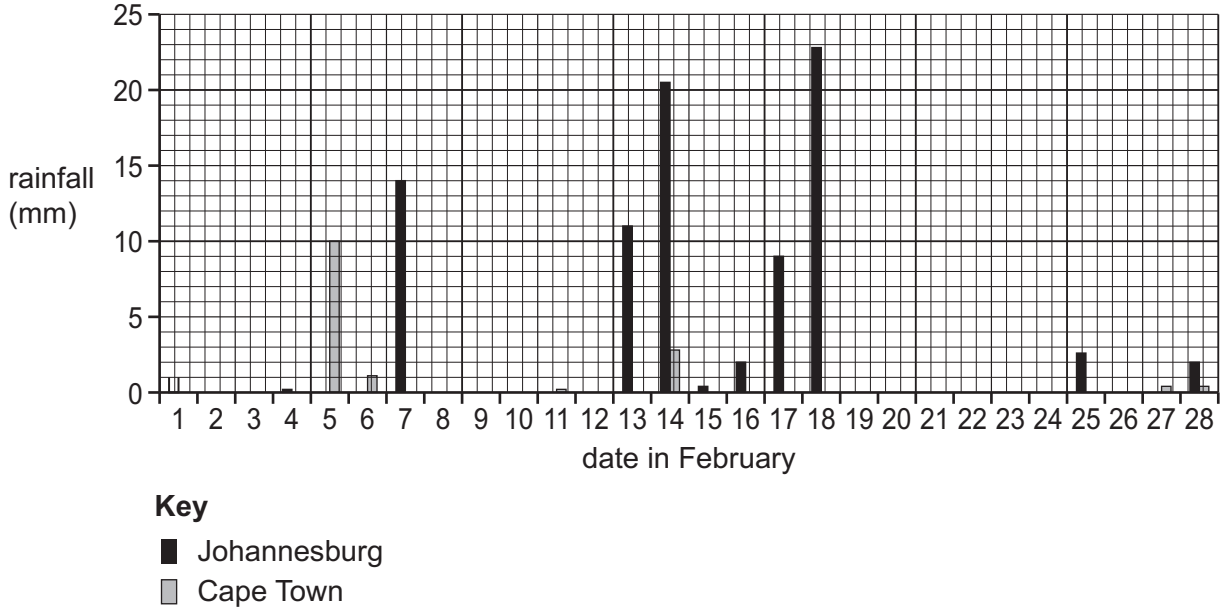

Fig. 1.3

(ii) The student made the conclusion that **Hypothesis 2**: *Rainfall in February is higher in Johannesburg than in Cape Town* was **true**. Do you agree with this decision? Support your answer with evidence from Fig. 1.3 and Table 1.3.

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..... [4]

[Total: 30]

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2 Students carried out some fieldwork about tourism at two sites near Kuala Lumpur, the capital city of Malaysia. The sites at Kuala Lumpur Bird Park and Batu Caves are shown in Fig. 2.1 (Insert).

The students decided to test the following hypotheses:

Hypothesis 1: *More foreign tourists come from Southeast Asia than from other parts of the world.*

Hypothesis 2: *Visitors to the Kuala Lumpur Bird Park spoil the environment more than visitors to the Batu Caves.*

(a) To test **Hypothesis 1** the students asked 100 visitors at the tourist sites which country they came from.

(i) The students used a systematic sampling method to select people to question. Describe this method of sampling.

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(ii) Why is sampling a useful fieldwork technique?

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(b) The results obtained by the students are shown in Table 2.1 (Insert).
A student showed the results on two maps, Figs. 2.2 and 2.3.

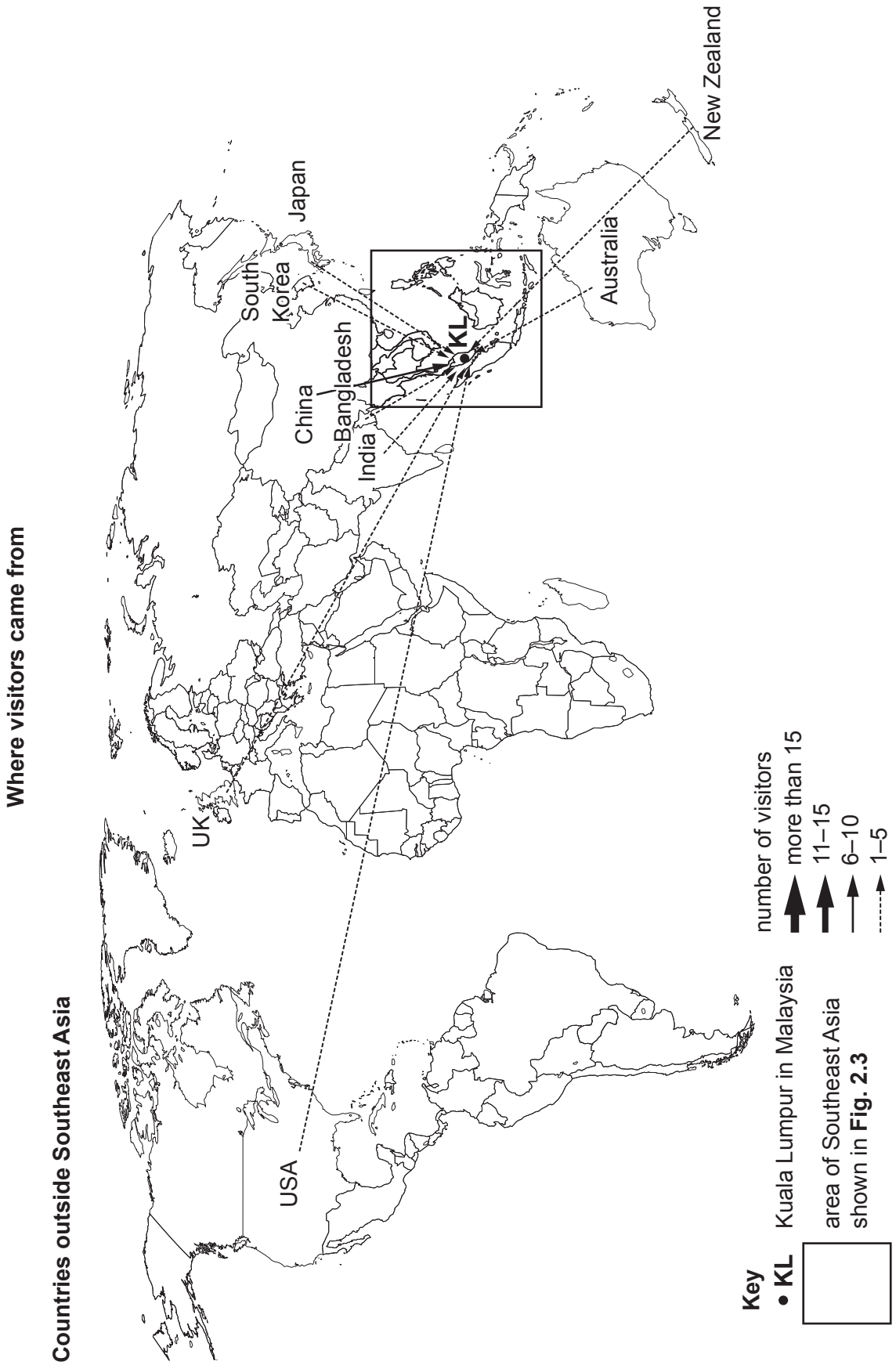

Fig. 2.2

Countries in Southeast Asia

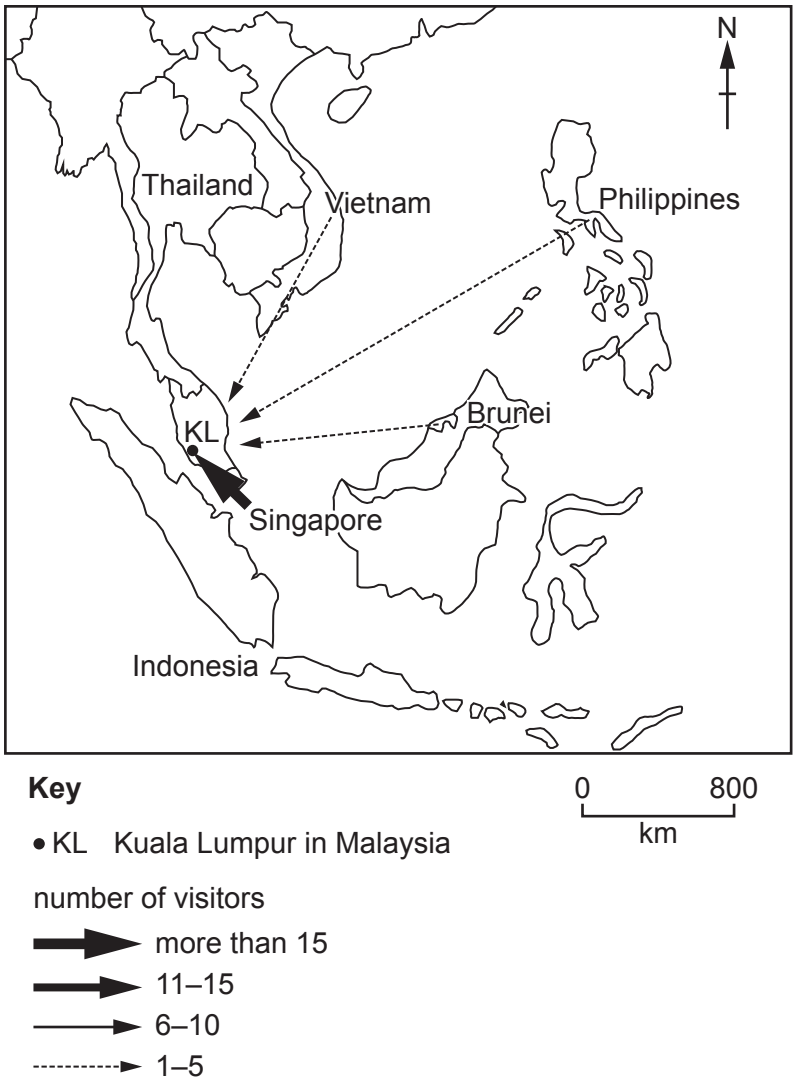

Fig. 2.3

(i) **Plot the results** for Indonesia and Thailand on **Fig. 2.3**. [2]

(ii) What conclusion would the students make about **Hypothesis 1**: *More foreign tourists come from Southeast Asia than from other parts of the world*? Support your decision with evidence from Figs. 2.2 and 2.3 and Table 2.1.

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..... [3]

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(c) To test **Hypothesis 2**: *Visitors to the Kuala Lumpur Bird Park spoil the environment more than visitors to the Batu Caves*, the students did an environmental quality survey at the two tourist sites.

First, the students did a practice environmental quality survey in a local area popular with tourists. The scores provided by two students are shown in Table 2.2 (Insert).

(i) Suggest **two** reasons why the students gave different scores for the practice environmental quality survey.

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(ii) Describe how the students did the actual environmental quality survey at the Kuala Lumpur Bird Park and the Batu Caves.

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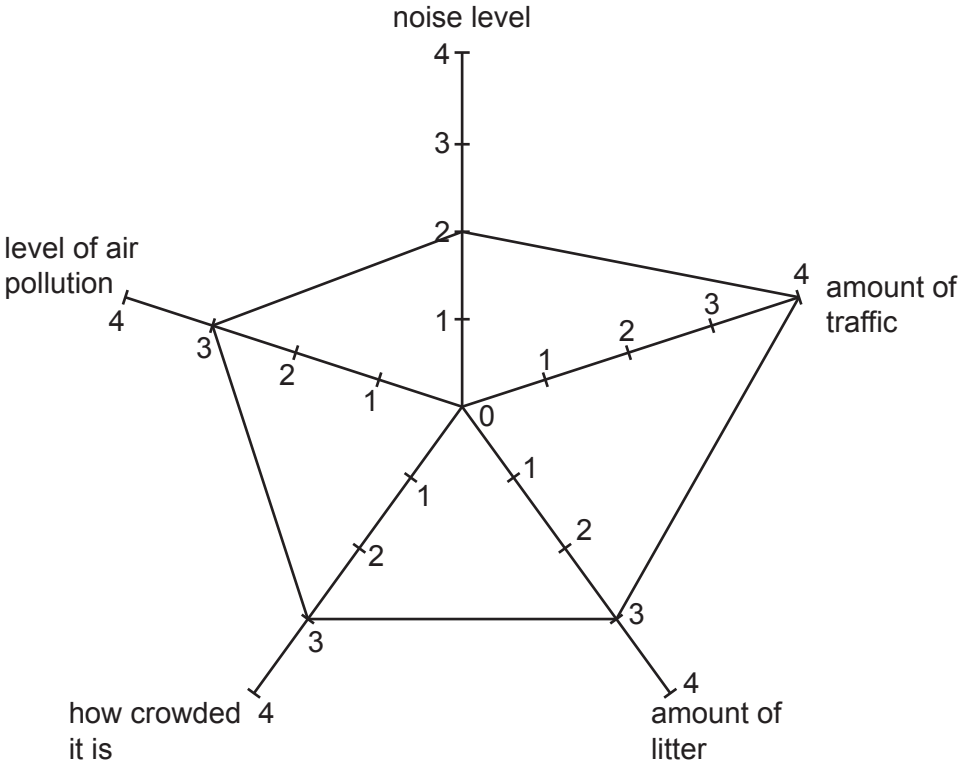
(d) One student's results of the environmental quality survey at the tourist sites are shown in Table 2.3 (Insert).

(i) **Plot the results** to complete the graph for Batu Caves on Fig. 2.4. [2]

Environmental quality survey results

Kuala Lumpur Bird Park



Batu Caves

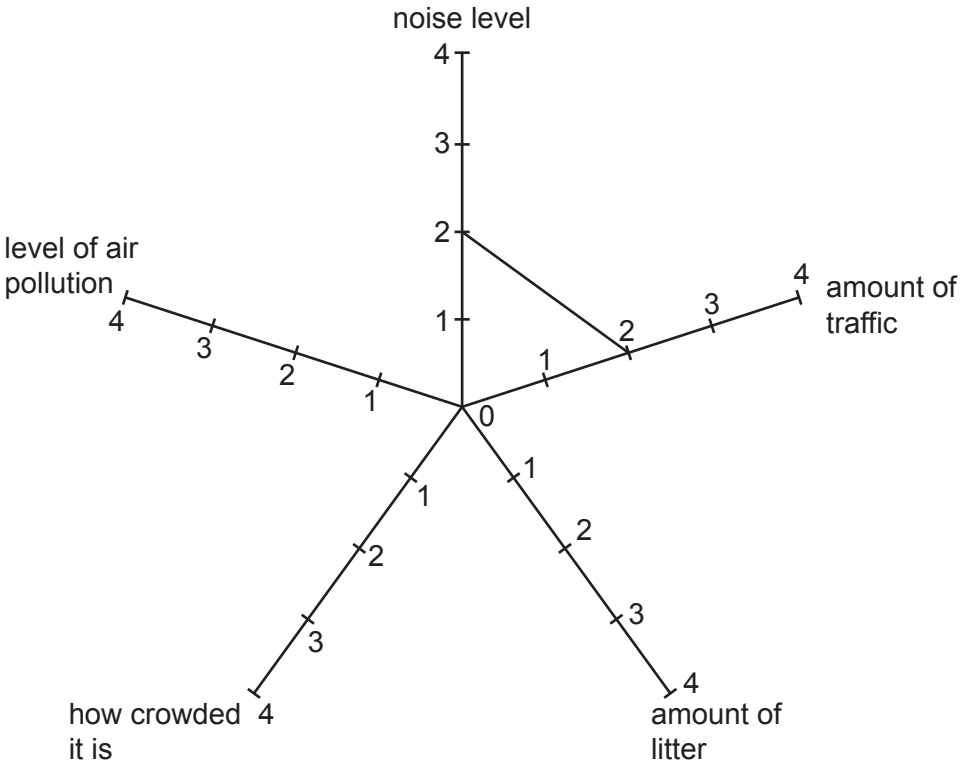


Fig. 2.4

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(ii) Do these results support **Hypothesis 2**: *Visitors to the Kuala Lumpur Bird Park spoil the environment more than visitors to the Batu Caves*? Support your conclusion with evidence from Fig. 2.4 and Table 2.3.

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(e) Other students investigated which attractions of Kuala Lumpur were most popular with the 100 visitors they sampled. Their questionnaire is shown in Fig. 2.5 (Insert).

(i) The answers to the two questions are shown in Table 2.4 (Insert).

Use the results to **complete the graph** for ecological attractions on Fig. 2.6. [2]

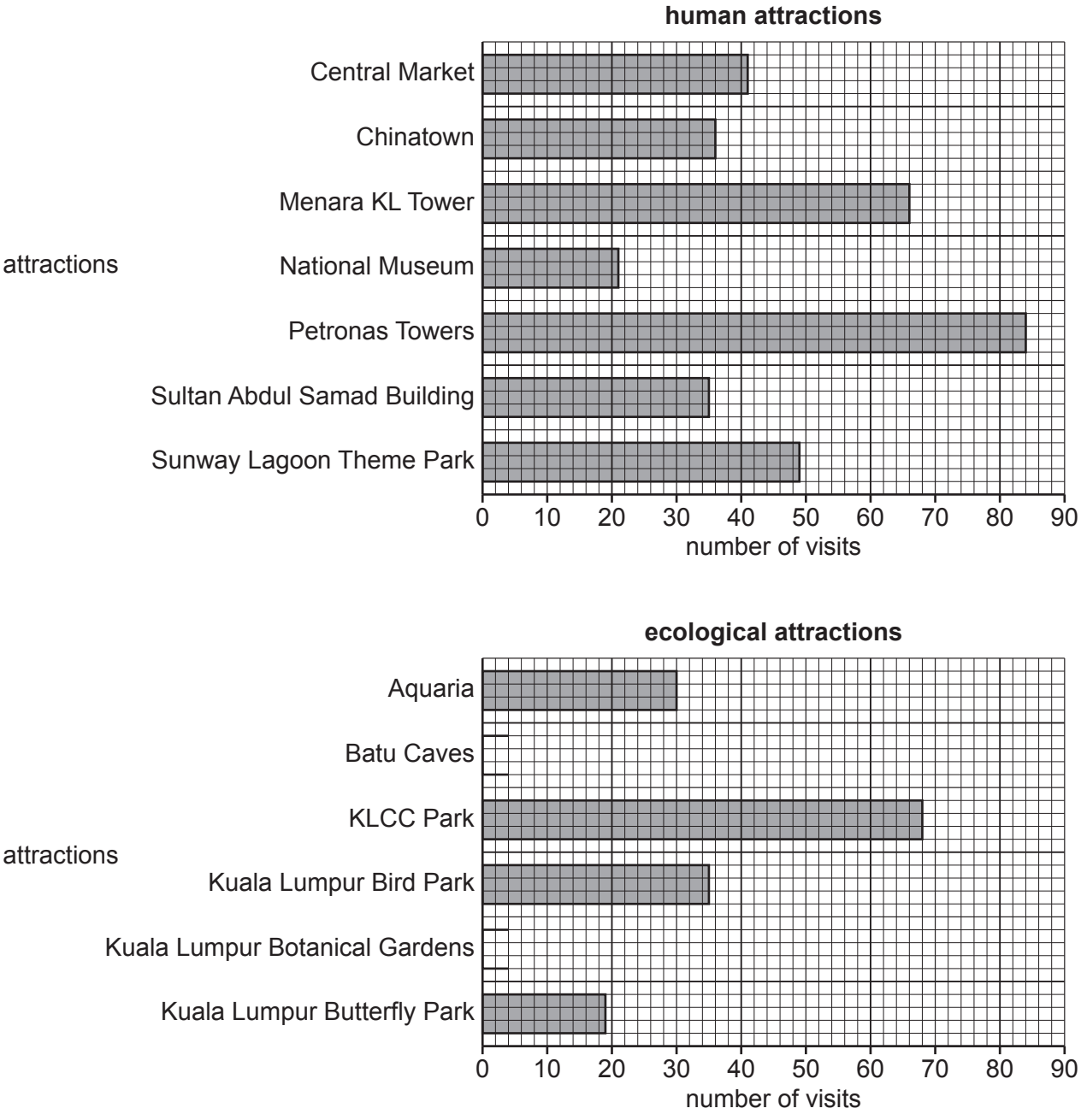

Fig. 2.6

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(ii) Which **type** of attractions (human or ecological) was more popular with visitors? Support your decision with evidence from Fig. 2.6 and Table 2.4.

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(f) Describe the possible advantages of tourist attractions for local people.

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