Cambridge Assessment International Education

Cambridge O Level

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

9976418560

GEOGRAPHY **2230/02**

Paper 2 Geographical Skills **May/June 2022**

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 an area of Grenada in the Caribbean. The scale is 1:25 000. The heights are in feet.

(a) (i) Identify **two** services found in the settlement of Grand Anse in grid square 2629.

1 .....

2 .....
[2]

(ii) What is found at grid reference 222266?

..... [1]

(iii) Name **both** the plantation crops grown on the Mt Hartman Estate in grid square 2727.

..... [1]

(iv) Give a bearing from grid north from the southern tip of True Blue Point (251256) to the southern tip of Prickly Point (257249).

..... [1]

(v) Describe the **natural** features of the coastline from Prickly Point (257249) to Point Salines in the west (214268).

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..... [3]

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(b) Study Fig. 1.1, which shows Zone A in the north-east of the map extract.

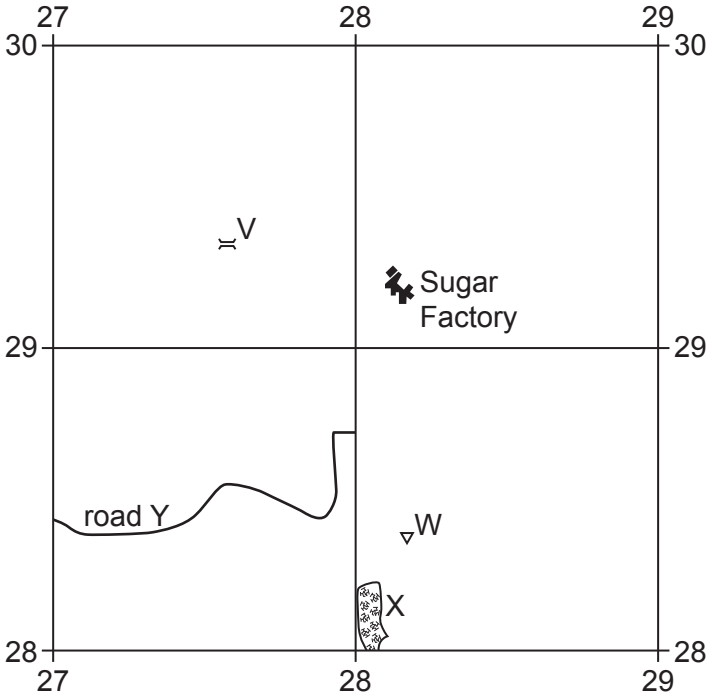

Fig. 1.1

(i) What total area does Fig. 1.1 represent? Tick (✓) the correct answer.

total area	tick (✓)
1 km^2	
4 km^2	
8 km^2	
16 km^2	

[1]

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

- feature V

.....

- feature W

.....

- natural vegetation at X.

.....

[3]

(iii) **On Fig. 1.1, add the route of the stream** in grid square 2729. [1]

(iv) Describe and explain the route of road Y in grid square 2728.

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..... [3]

(c) Study Fig. 1.2 (Insert), a satellite image which shows the location of a new airport and runway in the south-west of the map extract in 2020.

(i) Use the scale on the map extract to calculate the length of the new runway. Complete the following:

The length of the runway on Fig. 1.2 is ..... centimetres, which

represents ..... kilometres. [2]

(ii) Suggest **one** reason why this area was chosen to build a new airport and runway.

.....

..... [1]

(iii) Use the map extract to identify feature Z shown on Fig. 1.2.

..... [1]

[Total: 20]

Section B: Geographical skills

2 **(a)** Study Fig. 2.1, which shows life expectancy in Brunei from 1970 to 2018.

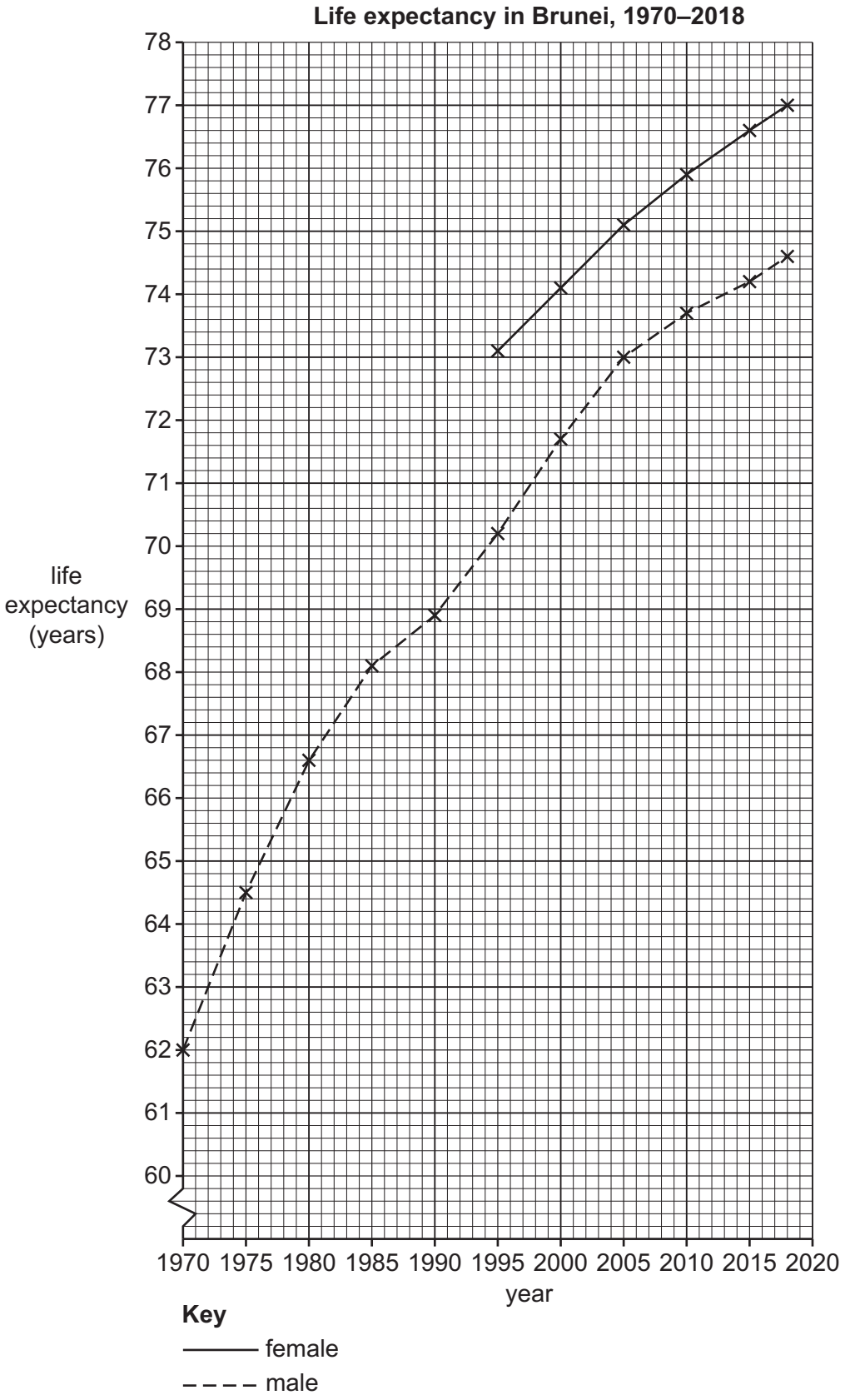

Fig. 2.1

(i) **On Fig. 2.1, plot the following data** for female life expectancy in Brunei from 1970 to 1990.

year	female life expectancy (years)
1970	63.2
1980	68.5
1990	71.8

[3]

(ii) What was male life expectancy in 2005?

..... [1]

(iii) By how many years has male life expectancy increased from 1970 to 2018?

..... [1]

(iv) Give **two** reasons why life expectancy in Brunei has increased from 1970 to 2018.

1 .....

2 .....

[2]

[Turn over

(b) Study Fig. 2.2, which shows life expectancy in the ASEAN countries in 2018.

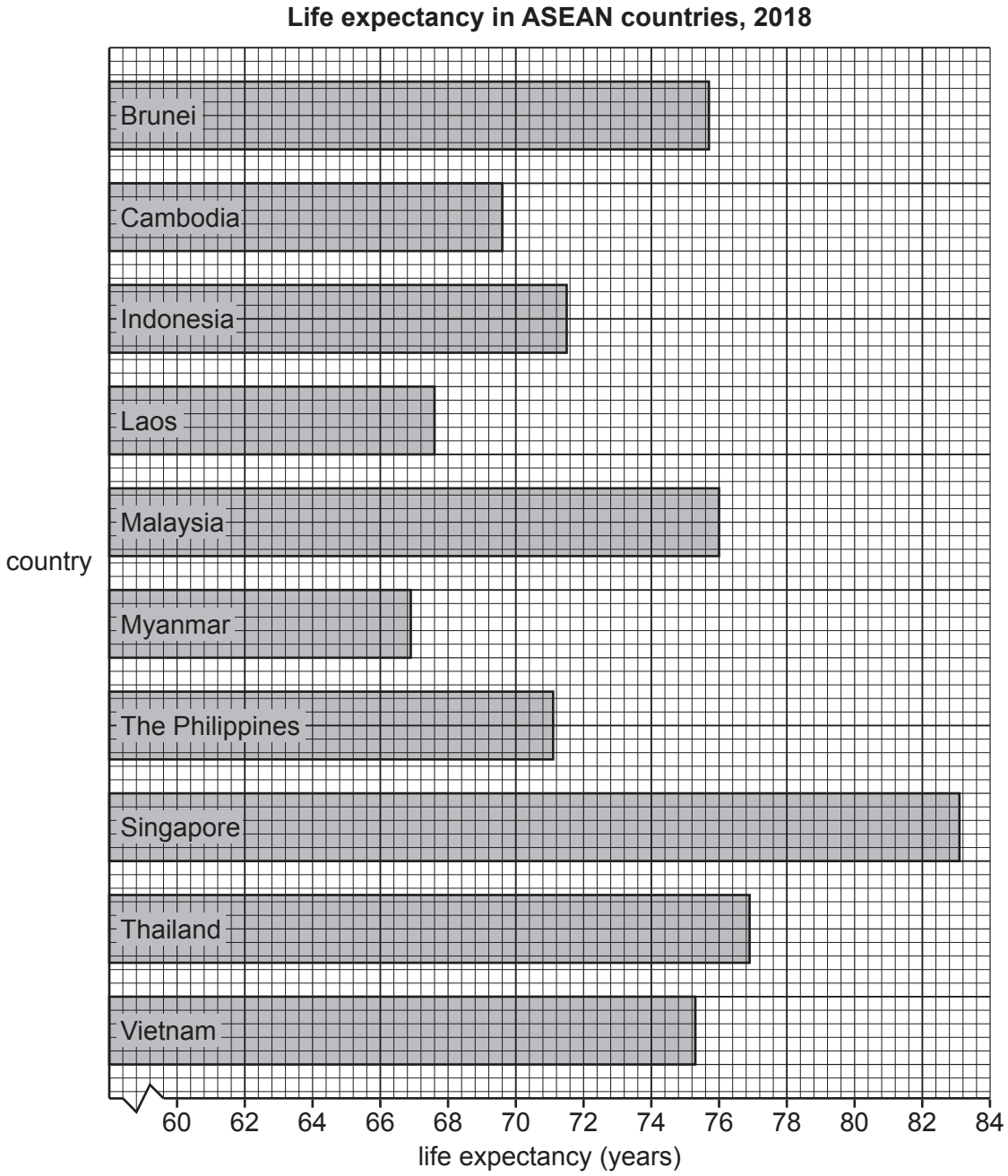

Fig. 2.2

(i) Make a rank list of the top three ASEAN countries in order of life expectancy.

Highest 1 .....

2 .....

3 .....

[1]

(ii) Compare life expectancy in Brunei with life expectancy in Indonesia. Use data from Fig. 2.2 to support your answer.

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..... [2]

[Total: 10]

TURN OVER FOR QUESTION 3

3 **(a)** Study Table 3.1, which shows category 5 typhoons in the South Pacific between 1988 and 2020.

Table 3.1

Category 5 typhoons in the South Pacific, 1988–2020

year	name of typhoon	top wind speed (mph)
1988	Anne	160
1992	Fran	160
1998	Ron	165
1998	Susan	160
2002	Zoe	180
2004	Heta	160
2005	Olaf	165
2005	Percy	160
2010	Ului	160
2014	Ita	160
2015	Pam	175
2016	Winston	180
2020	Harold	165

(i) How many category 5 typhoons with top wind speeds of 165 mph and above were there between 1988 and 2020?

..... [1]

(ii) Name the typhoon with a top wind speed of 175 mph.

..... [1]

(iii) In which year did Typhoon Olaf occur?

..... [1]

(b) Study Fig. 3.1 (Insert), a photograph which shows the impacts of Typhoon Harold in Vanuatu in April 2020.

(i) Describe the impacts of Typhoon Harold as shown in Fig. 3.1.

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..... [3]

(ii) Apart from high winds, state **two** other ways typhoons cause injury and deaths.

1 .....

2 .....
[2]

(c) Study Fig. 3.2, which shows a satellite image of Typhoon Harold travelling in a south-east direction over Vanuatu in April 2020.

Typhoon Harold, Vanuatu, April 2020

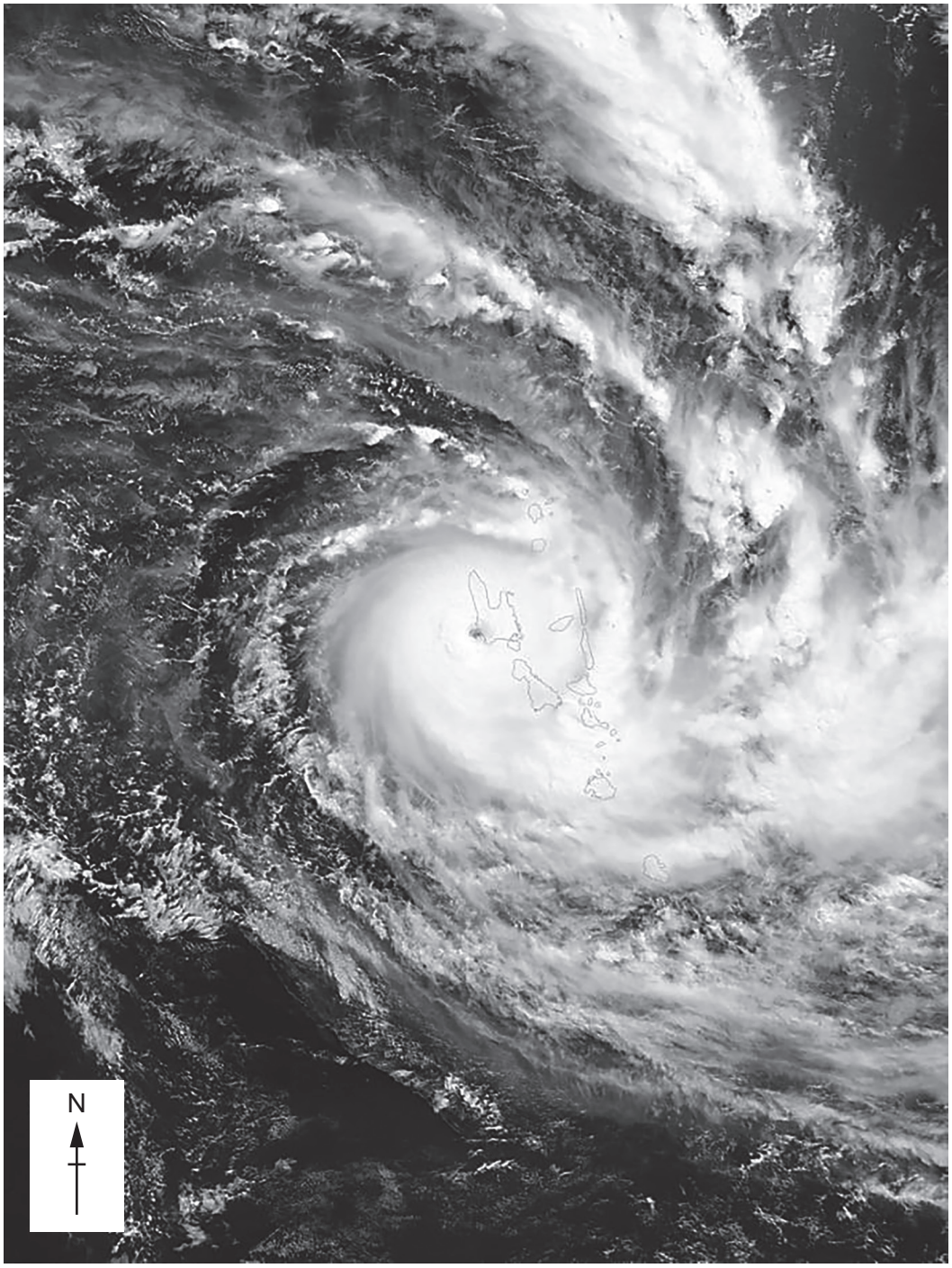

Fig. 3.2

On Fig. 3.2, add the following:

- an X to identify the eye of the storm
- an arrow to show the direction the typhoon is travelling. [2]

[Total: 10]

Section C: Geographical investigation

4 Students at a school in Vietnam did fieldwork on the characteristics of tourists to Hanoi. The locations of the three tourist sites where students collected their data are shown in Fig. 4.1 (Insert).

The students investigated the following hypotheses:

Hypothesis 1: *The majority of tourists visiting Hanoi will be from Asian countries.*

Hypothesis 2: *As the travel time to Hanoi increases, the number of days tourists stay in Hanoi will also increase.*

(a) In order to investigate their hypotheses the students conducted a questionnaire at three tourist sites. Fig. 4.2 (Insert) shows a copy of their questionnaire.

(i) Identify a suitable sampling method the students could have used to conduct their questionnaire. (Circle) your answer and explain your choice.

random systematic stratified opportunistic

.....

.....

.....

..... [2]

(ii) Before going on their field trip the students carried out a pilot study of their questionnaire at a local tourist site near their school.

Identify **two** advantages of carrying out a pilot study. Tick (✓) your choices.

	tick (✓)
test the questions to make sure they work	
photograph different tourist sites	
practise sampling techniques	
learn how to work safely at busy tourist sites	
get to know each other	

[2]

(b) To investigate **Hypothesis 1:** *The majority of tourists visiting Hanoi will be from Asian countries,* the students asked the question, *What country are you from?*

(i) Study Table 4.1 (Insert), which shows some of the questionnaire results. How many tourists were from Asia and how many tourists were from Europe?

Asia .....

Europe .....

[1]

(ii) **Complete Table 4.2** by calculating the percentage of tourists who came from North America.

Table 4.2

continent	percentage of tourists to Hanoi
Europe	40
Asia	37
Oceania	10
North America	
South America	3
	100

[1]

(iii) Use the results from Table 4.2 to **complete the graph in Fig. 4.3**.

Origin of tourists to Hanoi

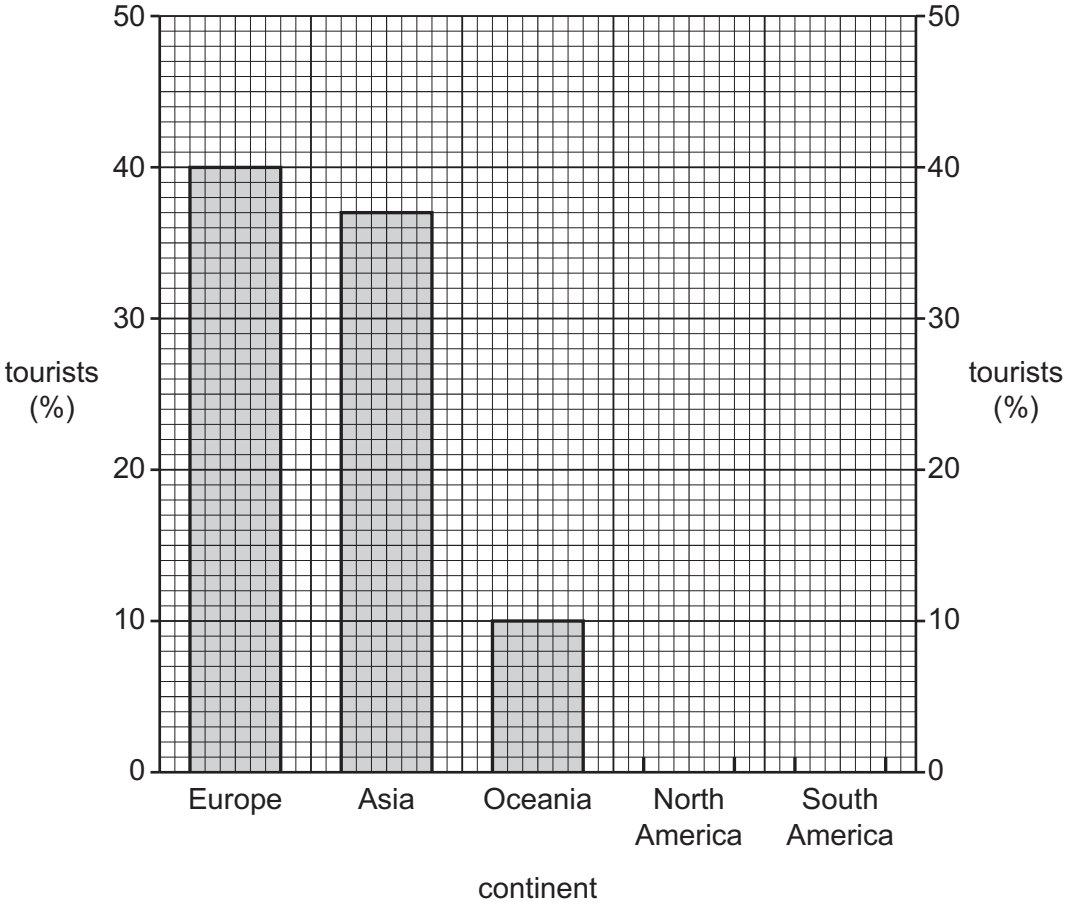

Fig. 4.3

[2]

(iv) What conclusion would you make about **Hypothesis 1:** *The majority of tourists visiting Hanoi will be from Asian countries*? Support your decision with evidence from Table 4.1 and Fig. 4.3.

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..... [3]

(c) The data collected to investigate **Hypothesis 2:** *As the travel time to Hanoi increases, the number of days tourists stay in Hanoi will also increase*, is shown in Table 4.1 (Insert).

The information in Table 4.1 contains both primary and secondary data.

What does the term *secondary data* mean?

.....

..... [1]

(d) Study Fig. 4.4, which shows a scatter graph of some data from Table 4.1 (Insert).

Scatter graph of some data from Table 4.1

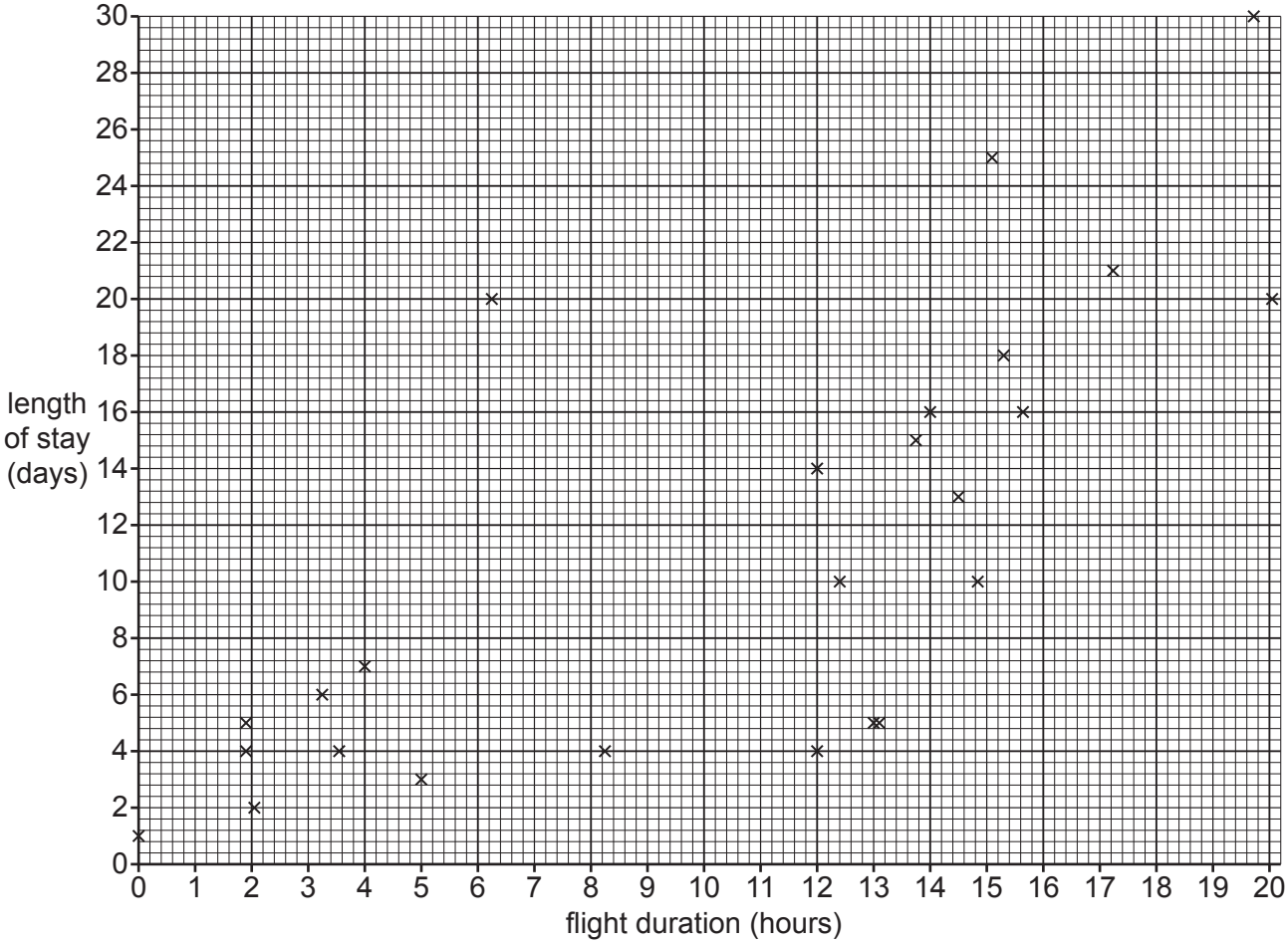

Fig. 4.4

(i) Add an X on Fig. 4.4, to show the data collected from the following tourist.

Question 2 *What country are you from?*	Travel time to Hanoi (flight duration)	Question 4 *How many days will you stay in Hanoi?*
The Philippines	9 hr 30 min	7

[1]

(ii) **Add a line of best fit on the scatter graph in Fig. 4.4** to show the general trend. [1]

(iii) (Circle) **one** anomaly **on the scatter graph in Fig. 4.4**. [1]

(iv) What conclusion would you make about **Hypothesis 2:** *As the travel time to Hanoi increases, the number of days tourists stay in Hanoi will also increase*? Support your decision with evidence from Fig. 4.4 and Table 4.1.

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..... [3]

(e) Having completed their investigation, the students evaluated their work. They identified a number of limitations of their fieldwork data collection:

Student A	Student B	Student C
I spent a different amount of time at each of the three tourist sites.	The data collection was only conducted in October.	My questionnaire was only written in English and Vietnamese.

Explain how **one** of these limitations could make the data collected biased.

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..... [2]

[Total: 20]

Additional pages

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

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