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Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **May/June 2018**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Calculator
Protractor

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Write your answer to each question in the space provided.
If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.

Answer **all** questions.

The Insert contains Tables 1.1, 1.2 and 1.3 and Fig. 1.4 for Question 1, and Table 2.2 for Question 2.
The Insert is **not** required by the Examiner.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **17** printed pages, **3** blank pages and **1** Insert.

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CAMBRIDGE International Examinations

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1 Students in Bangkok, Thailand investigated differences between two shopping centres in the north of the city. Central Ladprao Plaza is a larger shopping centre than La Villa and they are about 5 km apart. One group of students wanted to find out if there were differences between the shops and services in the two centres, and the different reasons people went to them.

They decided to test the following hypotheses:

Hypothesis 1: *There are differences between the numbers of high-, middle- and low-order shops and services in Central Ladprao Plaza and in La Villa.*

Hypothesis 2: *The main reasons for people going to shop in Central Ladprao Plaza and La Villa vary in importance.*

(a) Before they began their fieldwork the class of students made a summary table of the differences between high-, middle- and low-order goods and services. This is shown in Fig. 1.1 below.

Complete Fig. 1.1 to show the differences between high- and low-order goods and services. [3]

Goods and services

Order	How often they are bought	Average price of goods	Distance people are willing to travel	Examples of goods and services
High	....	....	....	jewellery 'designer' fashions
Middle	moderate frequency	moderate price	medium distance	clothes shoes
Low	....	....	....	food hairdressers

Fig. 1.1

(b) To investigate **Hypothesis 1** the students did fieldwork in the two shopping centres. One student's fieldwork notes describe their method in Fig. 1.2 below.

Extract from a student's fieldwork notes

Method

My group got a map which showed the different shops in Central Ladprao Plaza. We walked round the shopping centre and checked that the shops were still the same as on the map. We then used a tally chart and classified the shops as high-, middle- or low-order. We then went to La Villa and walked round the shopping centre classifying the shops on a tally chart in the same way.

Fig. 1.2

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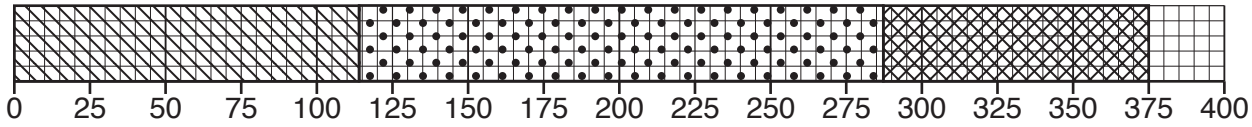
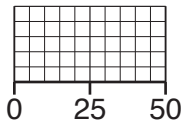
(i) The results of this fieldwork are shown in Table 1.1 (Insert). Use these results **to draw the divided bar graph** for La Villa in Fig. 1.3 below. [3]

Number of shops selling goods and services

Central Ladprao Plaza



La Villa



Key



high-order goods and services

middle-order goods and services

low-order goods and services

Fig. 1.3

(ii) Do the results of the students' fieldwork support **Hypothesis 1:** *There are differences between the numbers of high-, middle- and low-order shops and services in Central Ladprao Plaza and in La Villa*?
Support your conclusion with evidence from Fig. 1.3 and Table 1.1.

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.....[4]

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(c) To get some information to test **Hypothesis 2:** *The main reasons for people going to shop in Central Ladprao Plaza and La Villa vary in importance*, the students used a questionnaire with people in the two shopping centres. This questionnaire is shown in Fig. 1.4 (Insert).

(i) The students and teacher agreed the questions they would use in the questionnaire. Suggest **three** pieces of advice their teacher gave them about using the questionnaire with people who are shopping.

1 .....

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2 .....

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3 .....

.....[3]

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(ii) Table 1.2 (Insert) shows the results of Question 1 in the questionnaire.

Use the results from Table 1.2 **to complete the pie graph** for La Villa in Fig. 1.5 below. [2]

Answers to Question 1 in the questionnaire:
What is the main reason you are shopping here today?

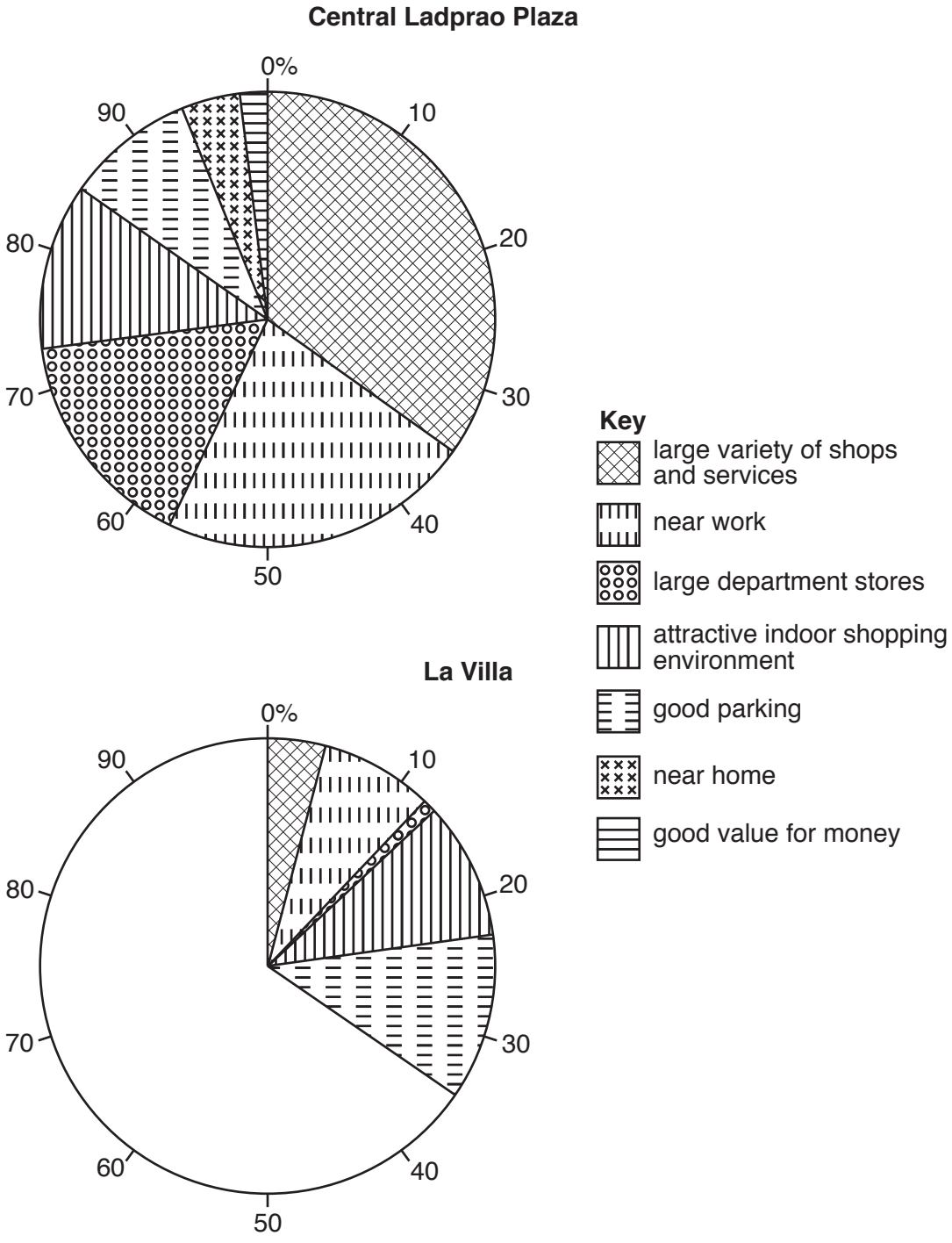

Fig. 1.5

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(iii) What conclusion would the students make about **Hypothesis 2:** *The main reasons for people going to shop in Central Ladprao Plaza and La Villa vary in importance*?
Use evidence from Fig. 1.5 and Table 1.2 to support your answer.

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(d) One student used the answers to Question 2 in the questionnaire (*How did you travel here today?*) to plot the graphs in Fig. 1.6 opposite.

(i) Use the results shown in Table 1.3 (Insert) to **plot the number of people** who went to La Villa by car in Fig. 1.6 opposite. [1]

(ii) Using Table 1.3 and Fig. 1.6, identify **two** differences between the methods of travel used to go to the two shopping centres.

1 .....

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2 .....

.....[2]

(iii) Suggest **three** factors which may affect people's method of travel to the shopping centres.

1 .....

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2 .....

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.....[3]

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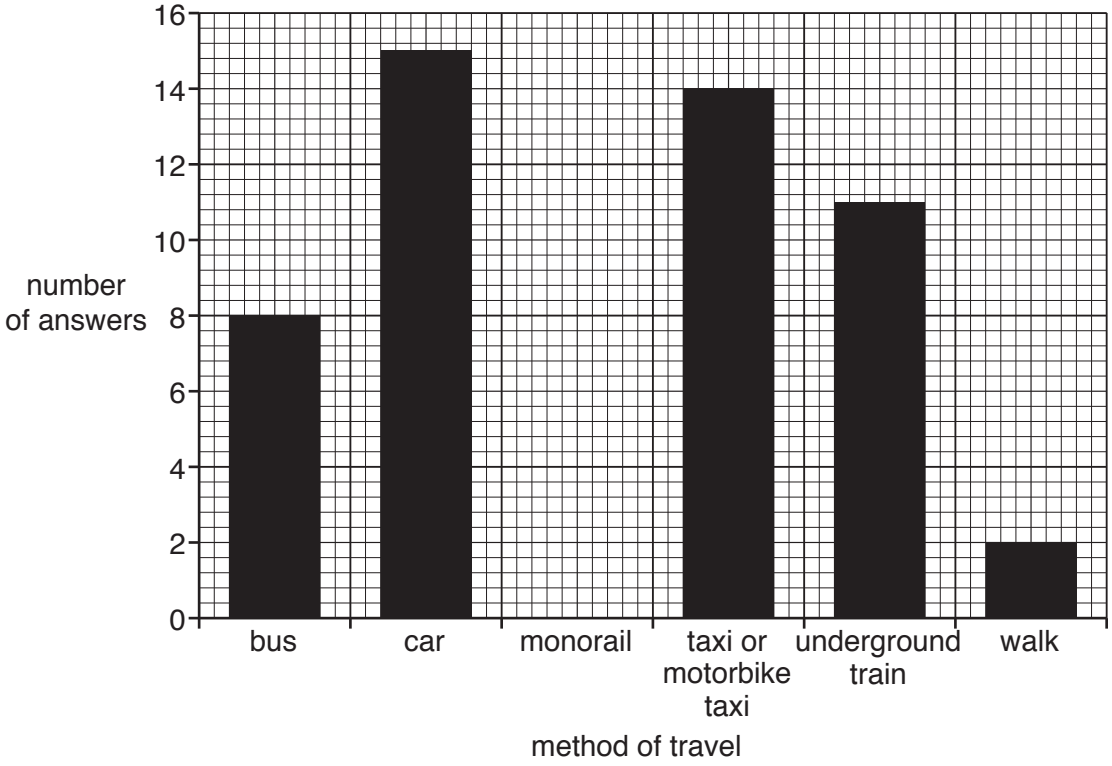
Methods of travel to the shopping centres

Central Ladprao Plaza



La Villa

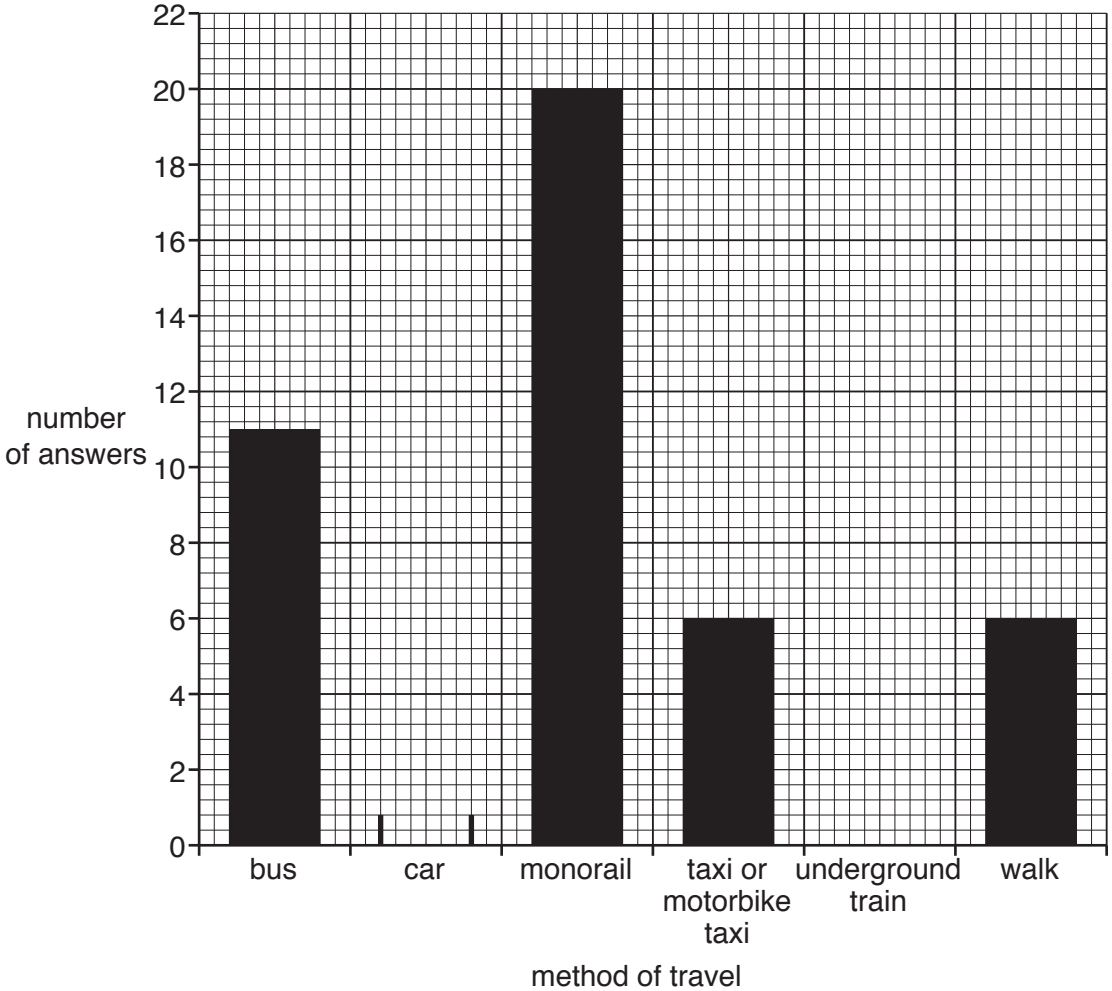


Fig. 1.6

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(e) Another group of students investigated the spheres of influence of the shopping centres.

(i) Which **one** of the following is the correct definition of *sphere of influence*? Tick (✓) your choice in the table below.

Definition	Tick (✓)
area surrounding a town or city	
area served by a town or service	
area where people have migrated from	
area next to the CBD	
area where people go to work	

[1]

(ii) Describe how the students could use the answers to Questions 3 and 4 in the questionnaire (Fig. 1.4 Insert) to investigate the spheres of influence of the two shopping centres.

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[Total: 30]

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2 Students at a school in England did fieldwork on a local river. They wanted to investigate how the river changed downstream.

(a) Before splitting up into separate groups the whole class of students did a pilot study at one site.

Identify **two** advantages of doing a pilot study from the table below. Tick (✓) your choices.

	Tick (✓)
look at different features along the river	
draw a map of the course of the river	
learn how to work safely in the river	
practise fieldwork techniques	
get to know other students before they begin fieldwork	

[2]

Two groups of students worked separately to investigate the following hypotheses:

Hypothesis 1: *The river gradient becomes steeper downstream.*

Hypothesis 2: *The size of pebbles on the river bed becomes smaller downstream.*

(b) (i) To investigate **Hypothesis 1** the students measured the gradient of the river bed over 10 m at five fieldwork sites. Describe a method to do this. Refer to the equipment they would use in your answer.

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.....[5]

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[Turn over

(ii) One group of students (group A) made one measurement at each site and the other group (group B) made four measurements. Explain why the results of group B should be more reliable.

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.....[2]

(c) The results of the measurements made by group B at each site are shown in Table 2.1 below.

Table 2.1

Measurements of angle of gradient made by group B

Site		Angle of gradient (°) measured over 10 m				
		Measurement 1	Measurement 2	Measurement 3	Measurement 4	Average angle (°)
1	upstream	11	14	7	5	9
2		6	7	9	7	7
3		3	6	5	2	**4**
4		10	3	8	6	7
5	downstream	4	11	5	4	6

Note - average figures given to the nearest whole number

(i) At which site (1 to 5) is the largest variation in measurements?

Site ..... [1]

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(ii) Fig. 2.1 below shows a method chosen by one student to present the results in Table 2.1. Use this method **to show the average gradient at site 3**. [1]

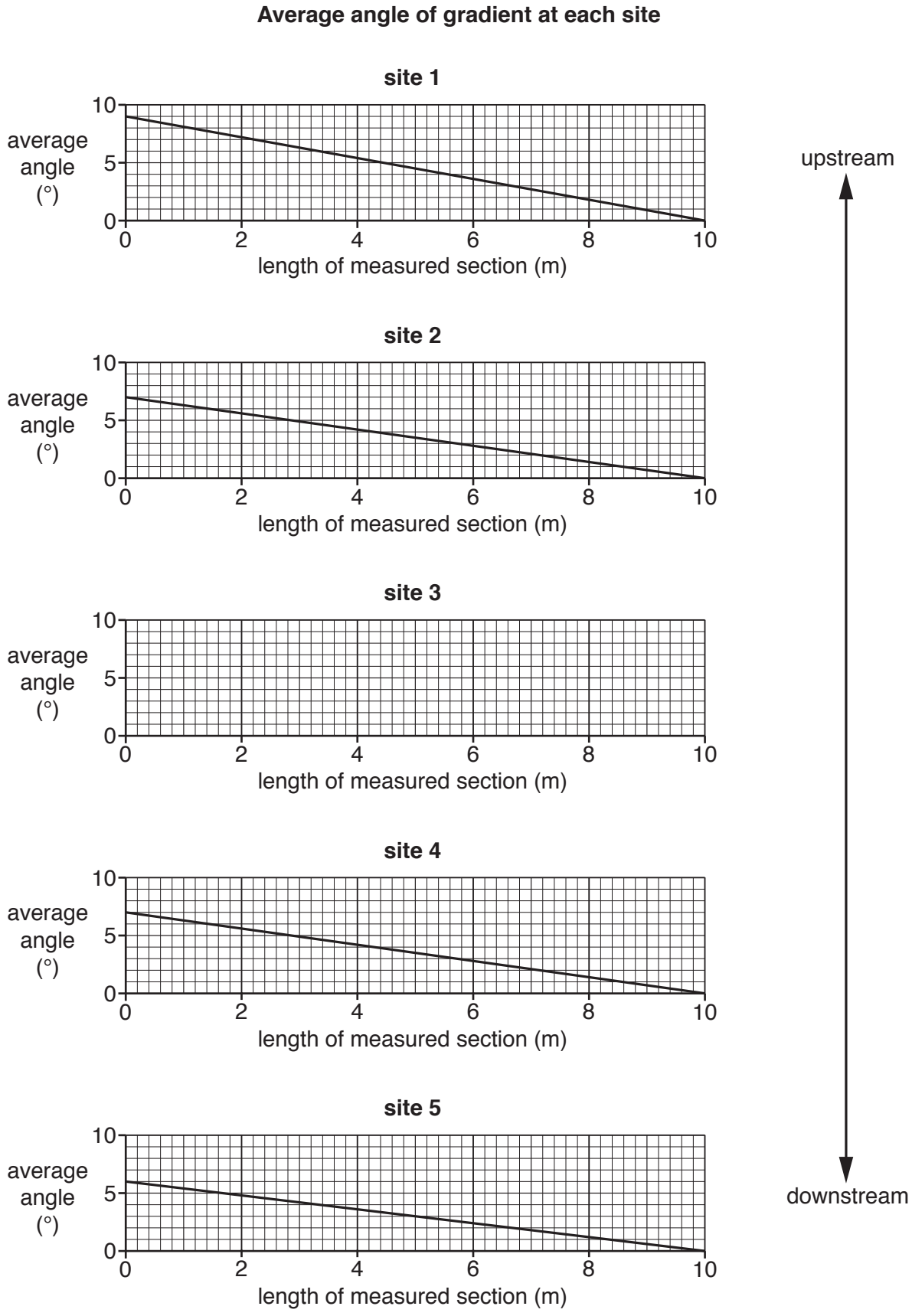

Fig. 2.1

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(iii) What conclusion would the students make about **Hypothesis 1:** *The river gradient becomes steeper downstream*? Support your answer with data from Fig. 2.1 and Table 2.1.

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.....[3]

(d) To investigate **Hypothesis 2:** *The size of pebbles on the river bed becomes smaller downstream*, the students in group A selected 10 pebbles at random from the bed of the river at each site.

(i) Suggest **two** weaknesses of selecting pebbles at random.

1 .....

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2 .....

.....[2]

(ii) The students in group B collected their sample of 10 pebbles at equal distances across the river bed. Which **one** of the following describes this method of sampling? Tick (✓) your answer.

	Tick (✓)
average	
balanced	
biased	
stratified	
systematic	

[1]

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(iii) Using a ruler the students then measured the length of the pebbles. The measurements of the pebbles collected by group B at site 2 are shown in Table 2.2 (Insert).

Plot on Fig. 2.2 below the length of pebble number 3 and the average length of the pebbles at site 2. [2]

Length of sampled pebbles at each site

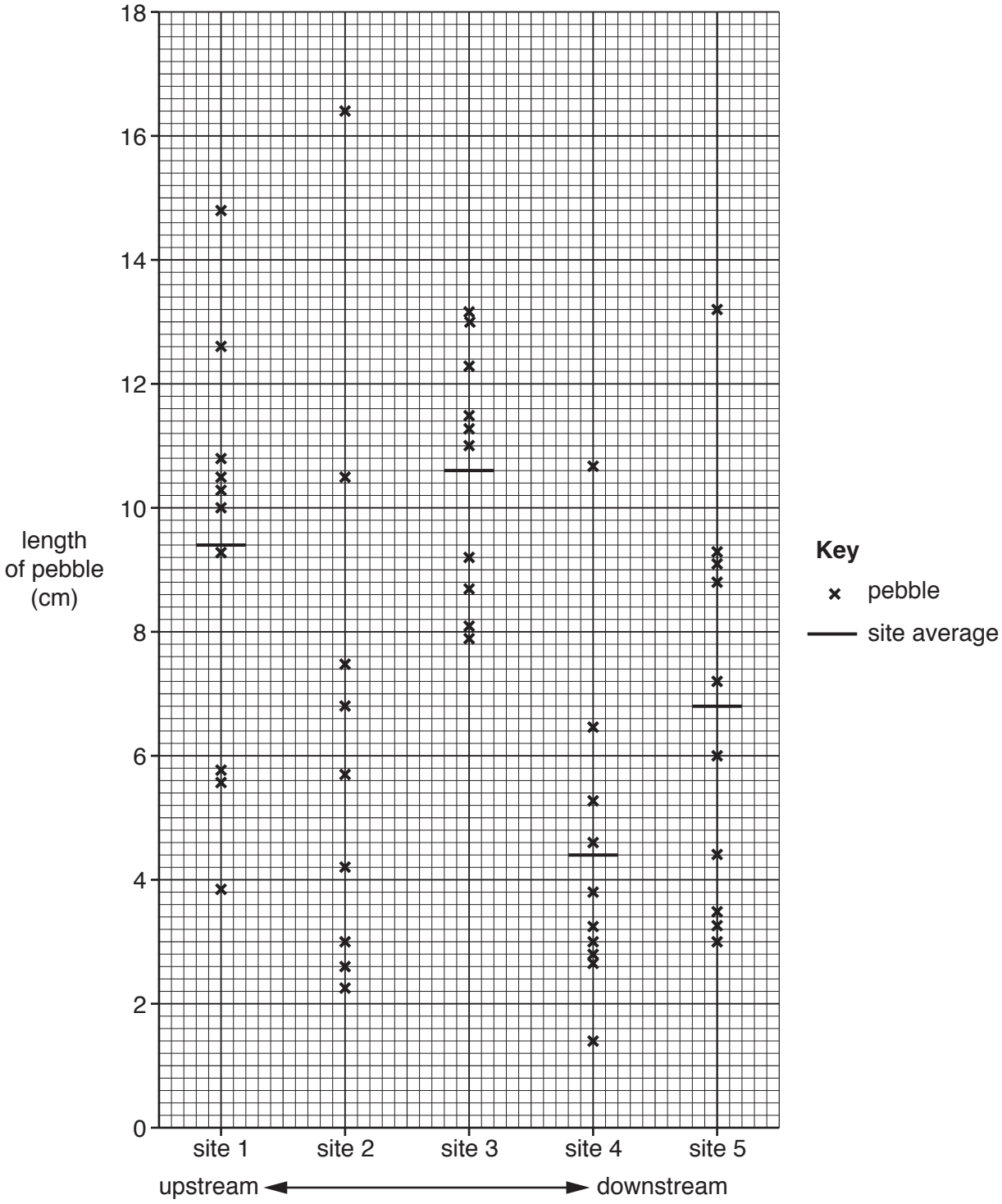

Fig. 2.2

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(iv) The students decided that **Hypothesis 2:** *The size of pebbles on the river bed becomes smaller downstream*, was **partly true**. Use evidence from Fig. 2.2 to explain why they reached this conclusion.

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(v) Explain why pebbles generally become smaller downstream. Refer to processes of erosion.

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(e) Whilst the two groups of students worked on Hypotheses 1 and 2, other students investigated how other characteristics of the river changed downstream.

(i) Suggest a suitable hypothesis to investigate. Do **not** choose gradient or pebble size.

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(ii) Describe a method to investigate your hypothesis at the five fieldwork sites.

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[Total: 30]

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Additional Pages

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

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