

### **Cambridge International Examinations**

Cambridge International General Certificate of Secondary Education (9-1)

CANDIDATE NAME		
CENTRE NUMBER	CANDIDATE NUMBER	

491207775

GEOGRAPHY 0976/42

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.



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

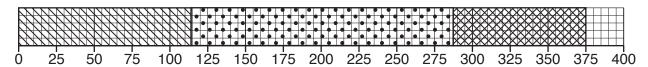
### Method

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.

(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]

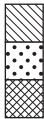
### Number of shops selling goods and services

### **Central Ladprao Plaza**



# **La Villa**25 50

## 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 <b>Hypothesis 1:</b> There are difference 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.	a
	[4	4]

(c)	in C	get some information to test <b>Hypothesis 2:</b> The main reasons for people going to shop Central Ladprao Plaza and La Villa vary in importance, the students used a questionnaire a 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 <b>three</b> pieces of advice their teacher gave them about using the questionnaire with people who are shopping.

	11 3	
1		

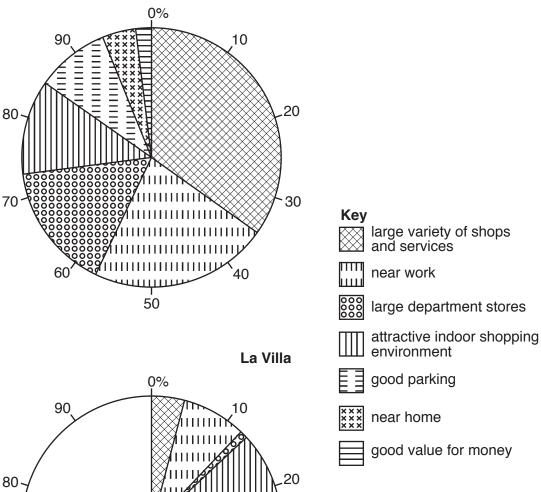
(ii) Table 1.2 (Insert) shows the results of Question 1 in the questionnaire.

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?

### **Central Ladprao Plaza**

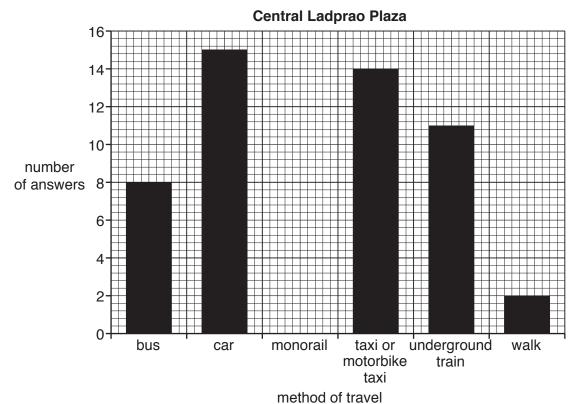


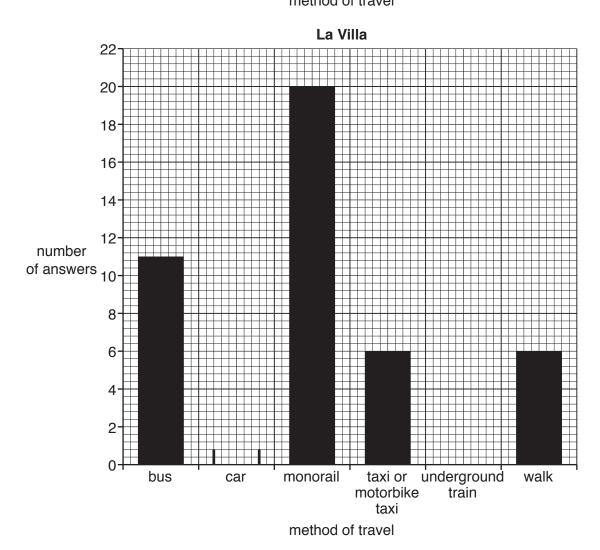
90 80 70 60 40

Fig. 1.5

	(iii)	What conclusion would the students make about <b>Hypothesis 2:</b> 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.
		[4]
(d)		student used the answers to Question 2 in the questionnaire (How did you travel here by?) to plot the graphs in Fig. 1.6 opposite.
	(i)	Use the results shown in Table 1.3 (Insert) to <b>plot the number of people</b> who went to La Villa by car in Fig. 1.6 opposite. [1]
	(ii)	Using Table 1.3 and Fig. 1.6, identify <b>two</b> differences between the methods of travel used to go to the two shopping centres.
		1
		2
		[2]
	(iii)	Suggest <b>three</b> factors which may affect people's method of travel to the shopping centres.
		1
		2
		3
		[3]

### Methods of travel to the shopping centres





- **(e)** Another group of students investigated the spheres of influence of the shopping centres.
  - Which **one** of the following is the correct definition of *sphere of influence*? Tick  $(\checkmark)$  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] 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]

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  $(\checkmark)$  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 <b>Hypothesis 1</b> the students measured the gradient of the river bed ove 10 m at five fieldwork sites. Describe a method to do this. Refer to the equipment they would use in your answer.
		[5

(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.
	[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	<b>1</b>	10	3	8	6	7
5	downstream	4	11	5	4	6

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NIOTA -	average	TIMITAE	alvan	tΛ	tna	naaract	WINDIA	nıımnar
11016 -	averaue	liuules	uiveii	ιU	เมเษ	Healest	WIIOIG	HUHHDEL

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

(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]

### Average angle of gradient at each site

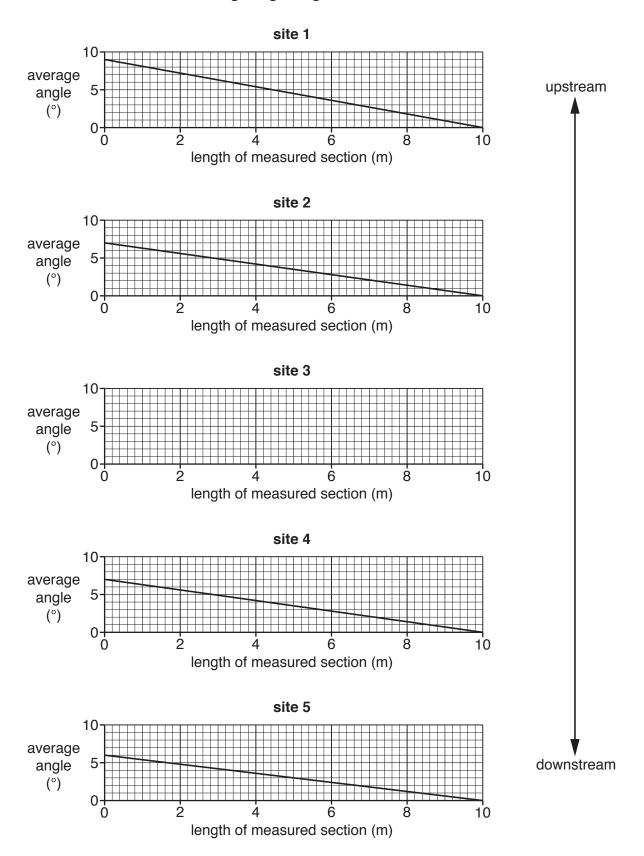


Fig. 2.1

	(iii)	What conclusion wo becomes steeper down				1: The river gradient Fig. 2.1 and Table 2.1.
				•••••		
						[3]
(d)	dои	investigate <b>Hypothes</b> Instream, the students ach site.				
	(i)	Suggest <b>two</b> weakne	sses of selecting p	ebbles at ra	indom.	
		1				
		2				
						[2]
	(ii)					qual distances across of sampling? Tick (✔)
				Tick (✓)		
			average			
			balanced			
			biased			

[1]

stratified

systematic

(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

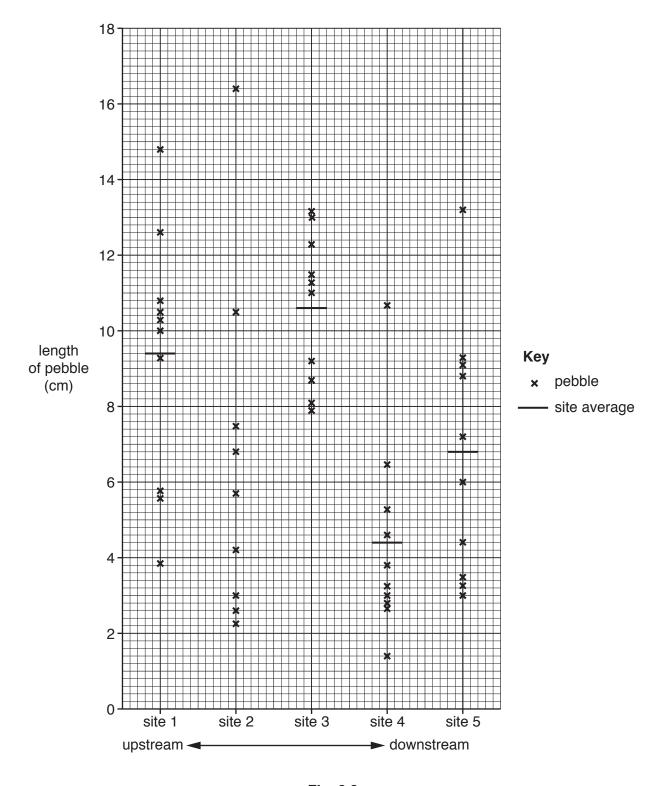


Fig. 2.2

	(iv)	The students decided that <b>Hypothesis 2:</b> The size of pebbles on the river bed becomes smaller downstream, was <b>partly true</b> . Use evidence from Fig. 2.2 to explain why they reached this conclusion.
		[3]
	(v)	Explain why pebbles generally become smaller downstream. Refer to processes of erosion.
		[3]
(e)		ilst the two groups of students worked on Hypotheses 1 and 2, other students investigated other characteristics of the river changed downstream.
	(i)	Suggest a suitable hypothesis to investigate. Do <b>not</b> choose gradient or pebble size.
		L <sup>4</sup> .

(ii)	Describe a method to investigate your hypothesis at the five fieldwork sites.
	[4]
	[Total: 30]

# **Additional Pages**

number(s) must be		s to complete t	ne answer(s) to	o any question(s)	, the question
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