CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

GEOGRAPHY **0460/43**

Paper 4 Alternative to Coursework **October/November 2013**

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 a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO **NOT** WRITE ON ANY BARCODES.

Answer **all** questions.

The Insert contains Tables 1 and 2 and Fig. 1 for Question 1, and Fig. 4 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.

For Examiner's Use	
Q1	
Q2	
Total	

This document consists of **18** printed pages, **2** blank pages and **1** Insert.

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International Examinations

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1 Some students wanted to compare two shopping centres in Miraflores, an area in Lima, Peru. Larco Avenue is part of the Central Business District (CBD) and Enrique Palacios is an area of local shops in a residential district.

The students decided to test the following hypotheses:

Hypothesis 1: *People who use the two shopping centres buy different types of goods.*

Hypothesis 2: *Shoppers visiting Larco Avenue take longer to get to the shops and go there more frequently, than those visiting Enrique Palacios.*

(a) (i) First the students had to classify the shops. Use arrows to match the statements in columns **X** and **Y** in the table below which shows examples of classification. One has been done for you.

X
Laundry
Not being used
Furniture store
Chemist / drug store

Y
Convenience shop
Comparison shop
Other service
Unoccupied shop

[2]

The students' next task was to count the different types of shops located in the two areas. Their results are shown in Table 1 (Insert).

(ii) Suggest **two** reasons why there are unoccupied shops in the two shopping centres.

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(iii) Which **two** of the following statements about different types of goods are correct? Tick (✓) your choices.

	Tick (✓)
Comparison (high order) goods are always local, fresh produce	
People travel further to buy comparison goods than convenience (low order) goods	
Comparison goods usually cost more than convenience goods	
Comparison goods are better quality than convenience goods	
Comparison goods are bought more frequently than convenience goods	

[2]

(b) Next the students used a questionnaire with some people in the shopping centres. This questionnaire is shown in Fig. 1 (Insert).

(i) Suggest **two** pieces of advice their teacher gave them about using a questionnaire with people who are shopping.

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(ii) Table 2 (Insert) shows the results of Question 1 in the questionnaire.
Do the results shown in Tables 1 and 2 support **Hypothesis 1:** *People who use the two shopping centres buy different types of goods*?

Use evidence from Tables 1 and 2 to support your answer.

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(c) To investigate **Hypothesis 2:** *Shoppers visiting Larco Avenue take longer to get to the shops and go there more frequently, than those visiting Enrique Palacios*, the students asked Questions 2 and 3 in their questionnaire.

(i) Table 3 below shows the results of Question 2 in the questionnaire.

Table 3

Answers to Question 2
(How long did your journey from home to the shops take?)

Time taken	Larco Avenue (CBD)	Enrique Palacios (Local shops)
	%	%
Less than 10 minutes	21	25
11 to 30 minutes	49	50
31 minutes to 1 hour	21	22
More than 1 hour	9	3

Use the results from Table 3 to complete the graph in Fig. 2 below. [2]
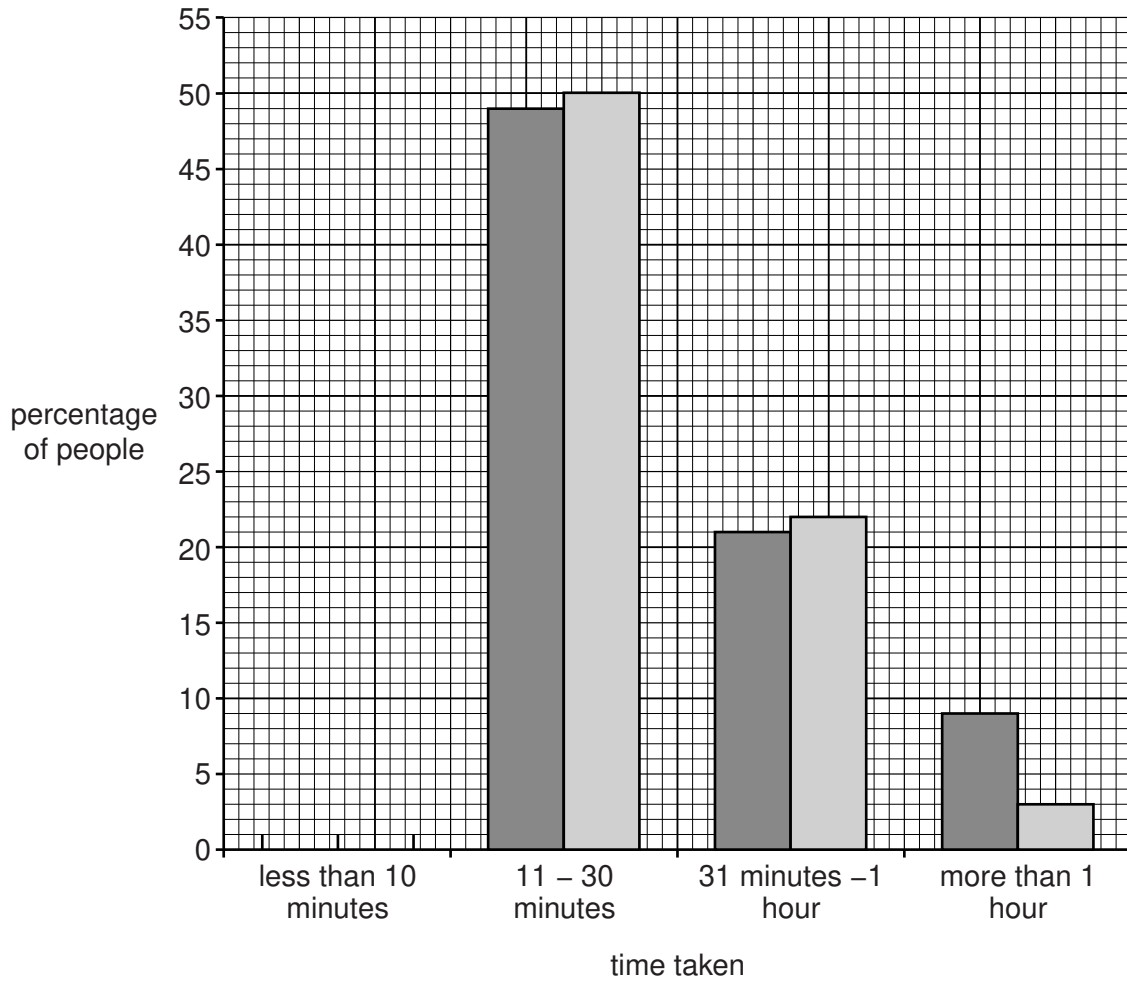
Answers to Question 2

Fig. 2

(ii) Table 4 below shows the results of Question 3 in the questionnaire.

Table 4

**Answers to Question 3
(When was your previous visit to these shops?)**

	Larco Avenue (CBD)	Enrique Palacios (Local shops)
	%	%
1 day ago	3	28
Between 2 & 6 days ago	15	50
Between 1 & 4 weeks ago	38	22
More than 4 weeks ago	44	0

Use the results from Table 4 to complete the pie chart for Enrique Palacios in Fig. 3B opposite. [2]

Answers to Question 3

Larco Avenue (CBD)

Key

⊠ 1 day ago

▥ between 2 & 6 days ago

⊞ between 1 & 4 weeks ago

▤ more than 4 weeks ago

Fig. 3A

Enrique Palacios (Local shops)

Key

(cross-hatch)	1 day ago
(vertical lines)	between 2 & 6 days ago
(plus marks)	between 1 & 4 weeks ago
(horizontal lines)	more than 4 weeks ago
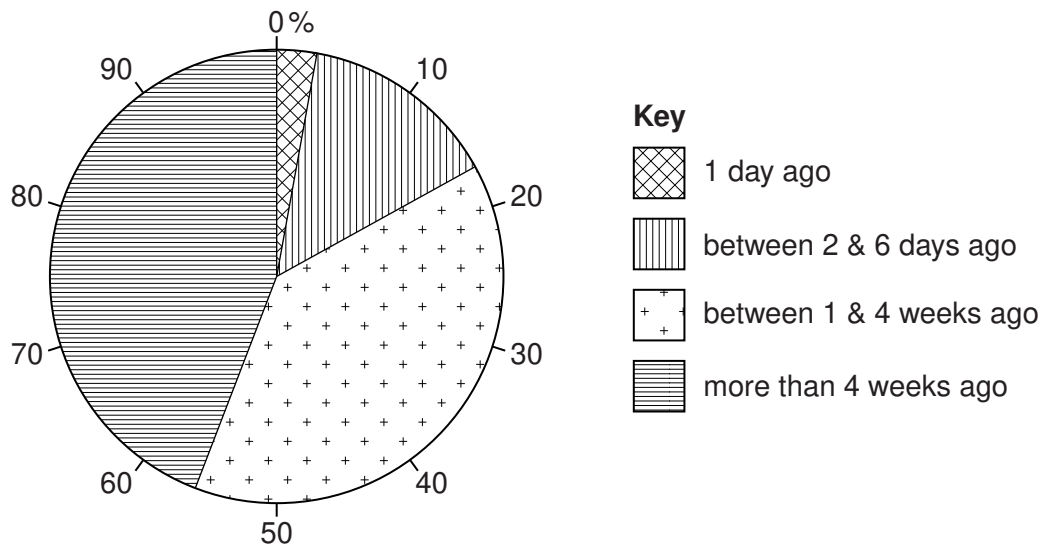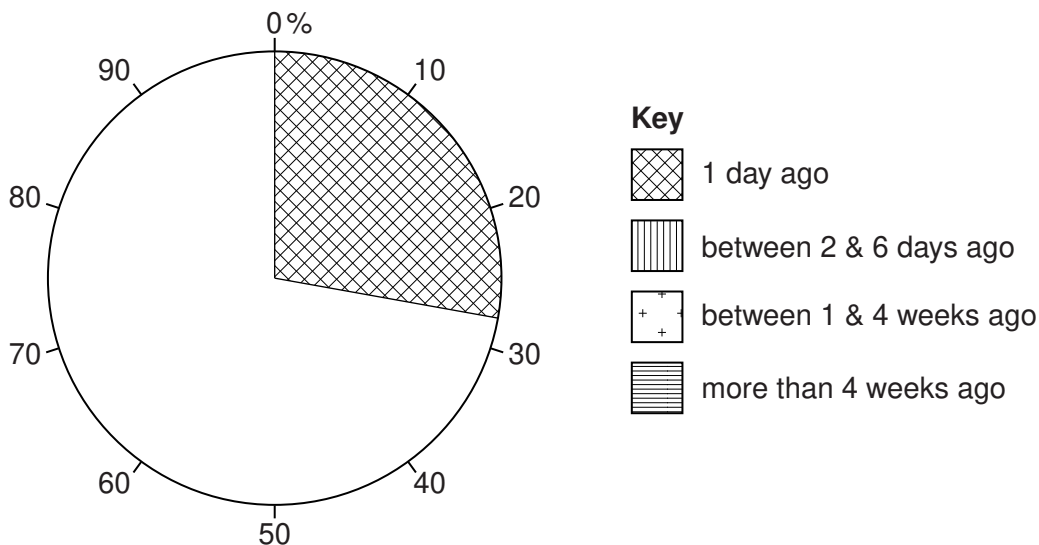
Fig. 3B

(iii) Do the results of Questions 2 and 3 in the questionnaire support **Hypothesis 2:**
Shoppers visiting Larco Avenue take longer to get to the shops and go there more frequently, than those visiting Enrique Palacios?

Use evidence from Figs 2 and 3 to support your conclusion.

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(d) One student thought that answers to the question: 'How long did your journey from home to the shops take?' might be affected by the type of transport which people used. The students then included an extra question (Question 4) in their questionnaire. The results of Question 4 are shown in Table 5 below.

Table 5

**Answers to Question 4
(How did you travel to the shopping centre today?)**

	Larco Avenue (CBD)	Enrique Palacios (Local shops)
	%	%
Walk	8	28
Car	36	22
Taxi	20	22
Bus	36	28

(i) Use the answers to Question 4 to compare the percentage of people who walked and travelled by car to the two shopping centres.

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(ii) How might the answers to Question 4 change the students' conclusion to **Hypothesis 2**: *Shoppers visiting Larco Avenue take longer to get to the shops and go there more frequently, than those visiting Enrique Palacios*?

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

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(e) To extend the investigation one student included the following question in her questionnaire:

'In which district of the city do you live?'

Suggest a suitable map to show the results of this question and describe how you would draw this map.

You may use a diagram in your answer.

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[3]

[Total: 30 marks]

2 Students who lived on a Mediterranean island carried out fieldwork at two local beaches. Cala Blanca is a pebble beach in a bay surrounded by cliffs and Cala Bassa is a long, straight sandy beach.

(a) Before they began their fieldwork their teacher reminded them of the need to be safe near the sea. Suggest **three** safety precautions that the students could take to reduce the risk of accident.

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In studying the two different beaches the students tested the following hypotheses:

Hypothesis 1: *The pebble beach has a steeper profile than the sandy beach.*

Hypothesis 2: *The size of beach material gets bigger away from the sea.*

(b) To investigate **Hypothesis 1** the students used a rope to make a transect line from the edge of the sea to the top of the beach. They then measured the different angles of slope. Fig. 4 (Insert) is a diagram which shows their method.

(i) Describe how the students measured the beach profile.

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(ii) The results of the measurements on both beaches are shown in Fig. 5, opposite.

Use these results to compare the width of the two beaches.

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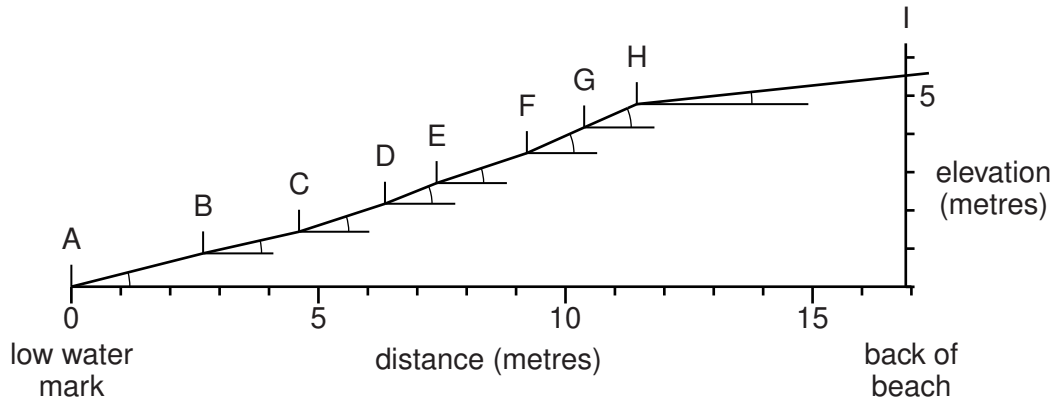
(iii) What conclusion could the students reach about **Hypothesis 1:** *The pebble beach has a steeper profile than the sandy beach?* Support your answer with evidence from Fig. 5.

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Beach profiles

Cala Blanca beach (pebble beach)

Cala Bassa beach (sandy beach)

Key

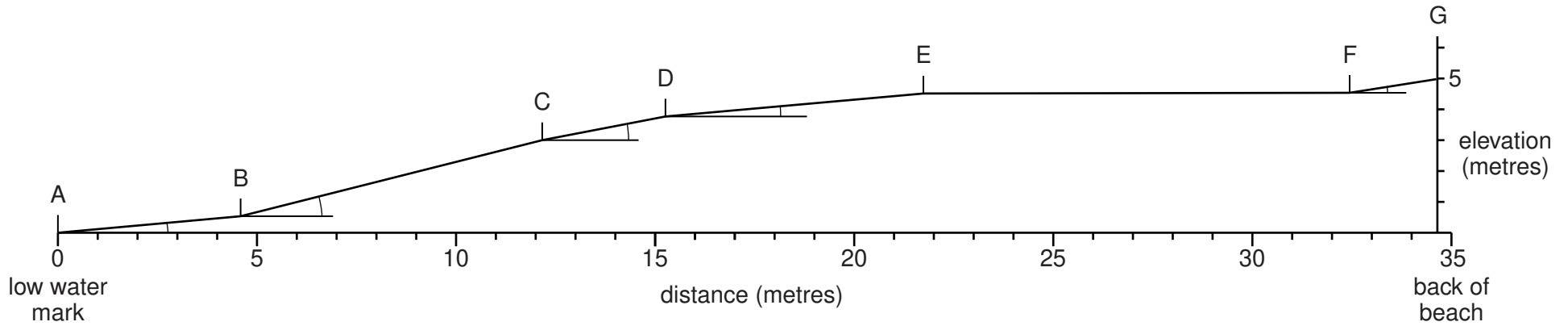A−B   section of beach profile

         slope measured

Fig. 5

(c) To investigate **Hypothesis 2:** *The size of beach material gets bigger away from the sea*, the students used a quadrat to estimate the percentage of different beach material in each section of their beach profiles.

Their results are shown in Tables 6 and 7, below.

Table 6

Beach material at Cala Blanca beach

Section of beach profile	Types of beach material and size (%)			
	Sand (Less than 2 mm)	Shingle (2 – 20 mm)	Pebble (21 – 100 mm)	Cobble (101 – 500 mm)
A – B	0	76	24	0
B – C	0	64	28	8
C – D	0	64	36	0
D – E	0	48	40	12
E – F	0	16	68	16
F – G	0	4	76	20
G – H	0	8	80	12
H – I	0	0	80	20

Table 7

Beach material at Cala Bassa beach

Section of beach profile	Types of beach material and size (%)			
	Sand (Less than 2 mm)	Shingle (2 – 20 mm)	Pebble (21 – 100 mm)	Cobble (101 – 500 mm)
A – B	100	0	0	0
B – C	88	12	0	0
C – D	96	4	0	0
D – E	100	0	0	0
E – F	100	0	0	0
F – G	84	16	0	0

(i) Describe how the students used the quadrat to collect this data.

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(ii) Suggest **one** problem of classifying beach material into sand, shingle, pebble or cobble.

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(iii) Use Table 6 to complete the divided bar graph for section D – E on Cala Blanca beach in Fig. 6 below. [3]

Types of beach material at Cala Blanca beach

Fig. 6

Key

sand

shingle

pebble

cobble

Types of beach material at Cala Bassa beach

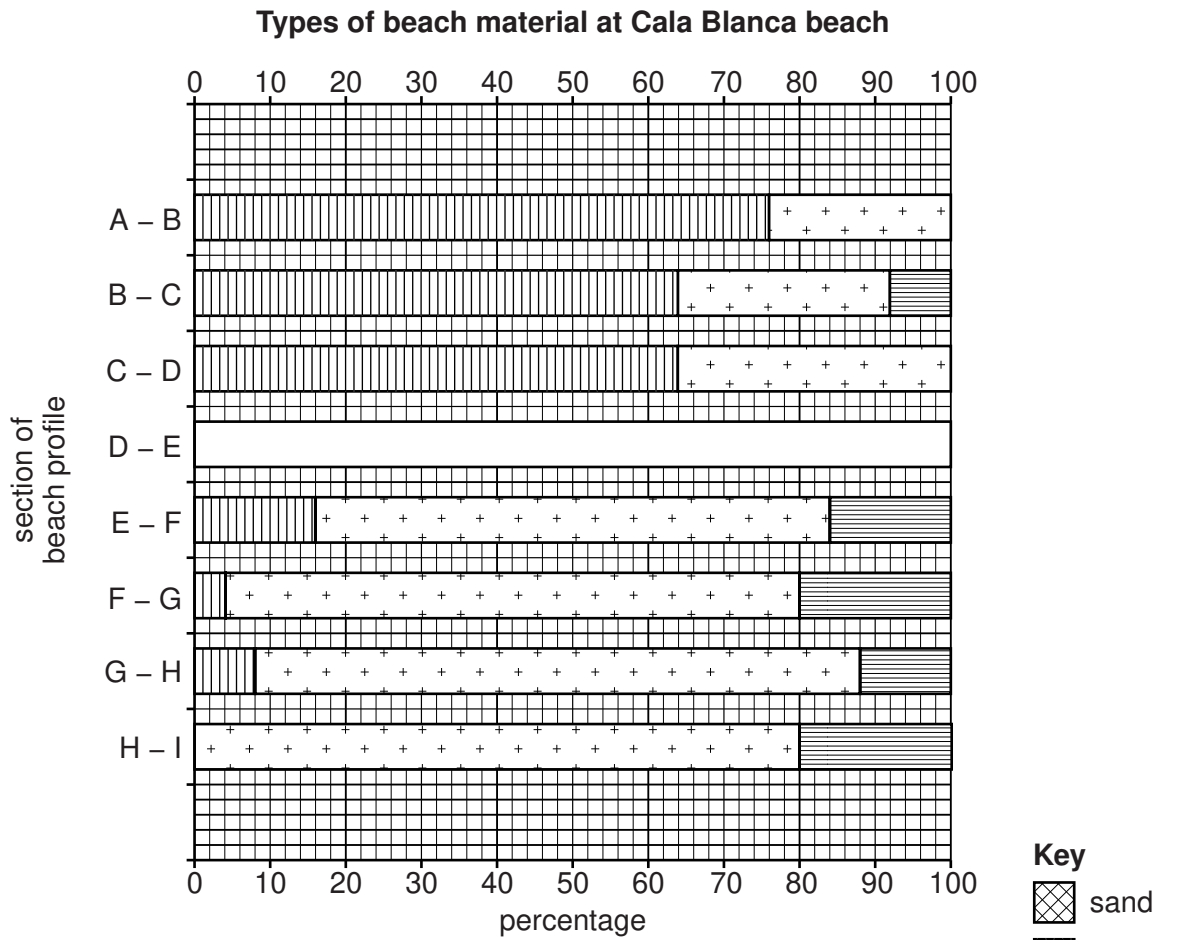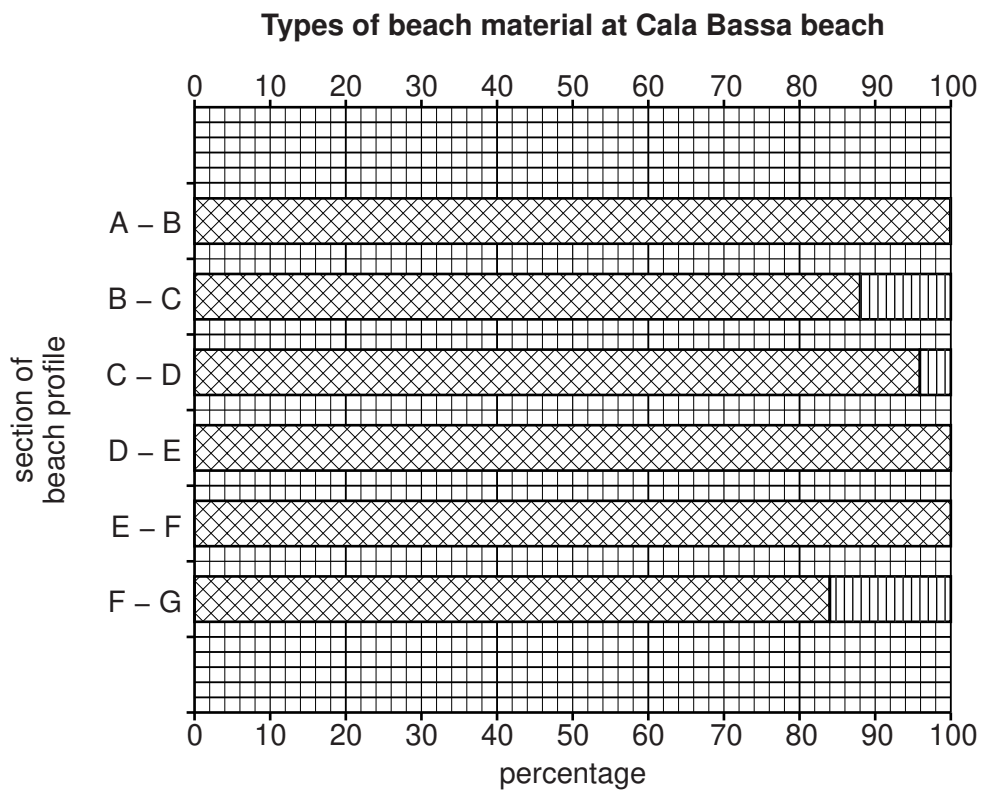**Fig. 7**

(iv) Do the results of the fieldwork support **Hypothesis 2:** *The size of beach material gets bigger away from the sea*? Support your decision about both beaches with data from Tables 6 and 7 and Figs 6 and 7.

Cala Blanca beach

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Cala Bassa beach

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(v) Explain why the size of beach material varies along the beach profile between low water mark and the back of Cala Blanca beach.

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(d) (i) Suggest a hypothesis to investigate longshore drift.

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(ii) Describe how the students could investigate this hypothesis.

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[Total: 30 marks]

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