www.dynamicpapers.com
www.XtremePapers.com

Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

5018367870

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **May/June 2015**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Calculator
Ruler

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.

Answer **all** questions.

The Insert contains Figs 1 and 3 and Tables 1 and 2 for Question 1, and Figs 5 and 6, Table 4 and Photograph A 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.

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

This document consists of **13** printed pages, **3** blank pages and **1** Insert.

© UCLES 2015

CAMBRIDGE International Examinations

www.dynamicpapers.com

BLANK PAGE

www.dynamicpapers.com

1 Students in Mar del Plata, a large tourist resort in Argentina, were interested in the effects of tourism on the city and how these varied between the summer tourist season and winter when there were fewer tourists.

Their two hypotheses were:

Hypothesis 1: *The advantages of tourism are greater than the disadvantages.*

Hypothesis 2: *The amount of traffic is greater in summer than in winter because of tourism.*

(a) The students decided to use a questionnaire to investigate **Hypothesis 1**.
This is shown in Fig. 1 (Insert).

(i) They showed the questionnaire to their teacher who suggested that before they used it with people they should first ask them if they lived in Mar del Plata.

Why do you think the teacher made this suggestion?

.....

.....

.....

.....[2]

(ii) Name and describe **one** sampling method to select 150 residents of Mar del Plata to complete the questionnaire.

Name of sampling method: .....

Description: .....

.....[2]

(iii) Give **two** advantages of sampling.

1 .....

.....

2 .....

.....[2]

www.dynamicpapers.com

(b) The answers to Question 1: *What do you think are the main advantages of tourism in Mar del Plata?* and Question 2: *What do you think are the main disadvantages of tourism in Mar del Plata?* are shown in Table 1 (Insert).

(i) Use the results shown in Table 1 to complete Figs 2A below and 2B opposite. [2]

Residents' answers to Question 1 on the questionnaire

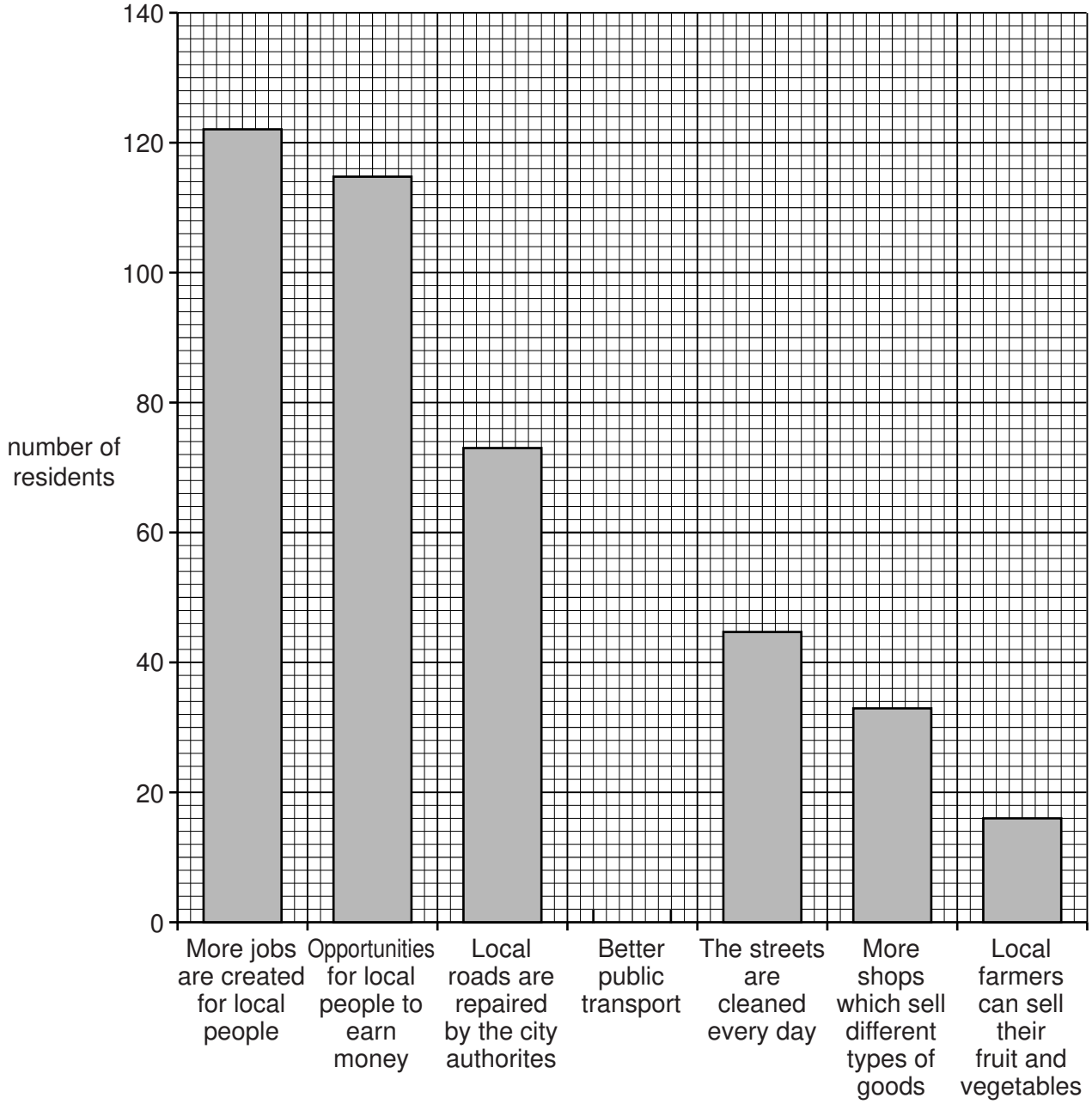


Fig. 2A

© UCLES 2015

www.dynamicpapers.com

Residents' answers to Question 2

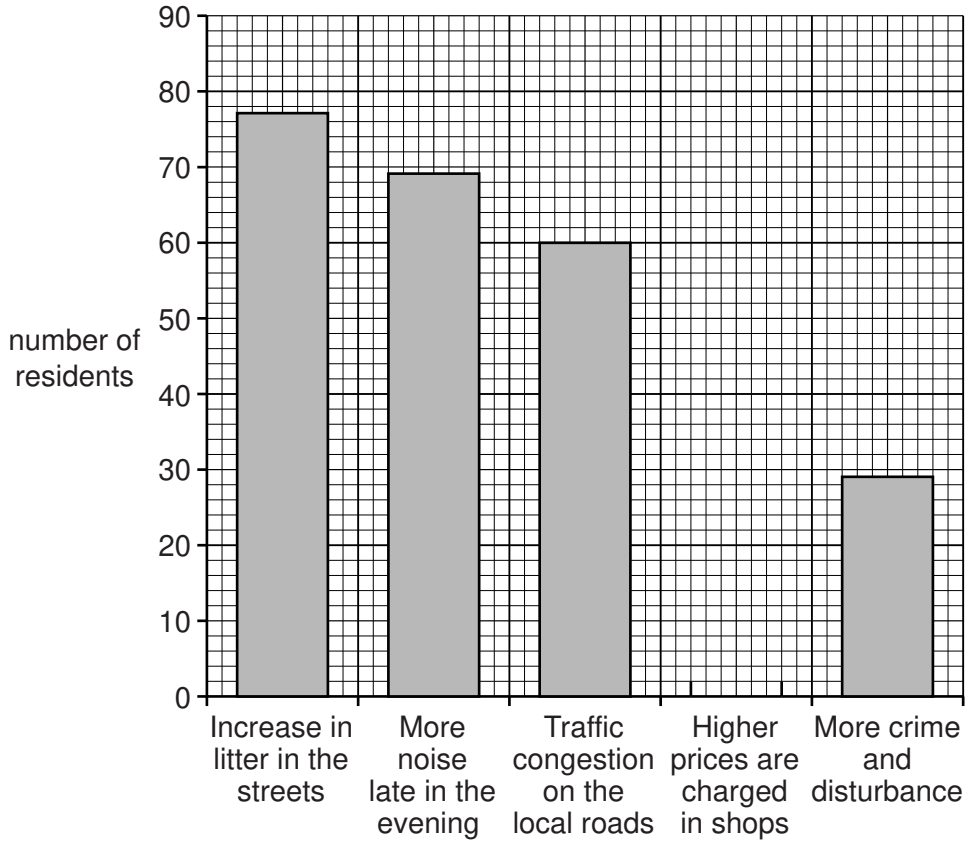


Fig. 2B

(ii) What conclusion can you make about **Hypothesis 1:** *The advantages of tourism are greater than the disadvantages*? Support your decision with evidence from Table 1 and Figs 2A and 2B.

.....

.....

.....

.....

.....

.....

.....

.....[4]

© UCLES 2015

[Turn over

www.dynamicpapers.com

(iii) Residents of Mar del Plata identified 'More jobs are created for local people' and 'Opportunities for local people to earn money' as the main advantages of tourism.

Explain why these are important for residents.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(c) Traffic congestion was identified as a disadvantage of tourism. The students then investigated **Hypothesis 2:** *The amount of traffic is greater in summer than in winter because of tourism.*

To investigate the hypothesis the students did a traffic survey at two locations, **X** and **Y**, shown on Fig. 3 (Insert). The students collected their data in summer and used data collected by another group of geography students the previous winter for comparison.

(i) Which **one** of the following describes the data used by these students but not collected by them? Circle your answer. [1]

biased data primary data raw data secondary data

(ii) Suggest **three** ways in which the students could make sure that the traffic survey data which they collected was reliable.

1 .....

.....

2 .....

.....

3 .....

.....[3]

© UCLES 2015

www.dynamicpapers.com

(iii) The results of the traffic survey are shown in Table 2 (Insert). Use these results to complete Fig. 4A, below. [2]

Traffic survey results at location X

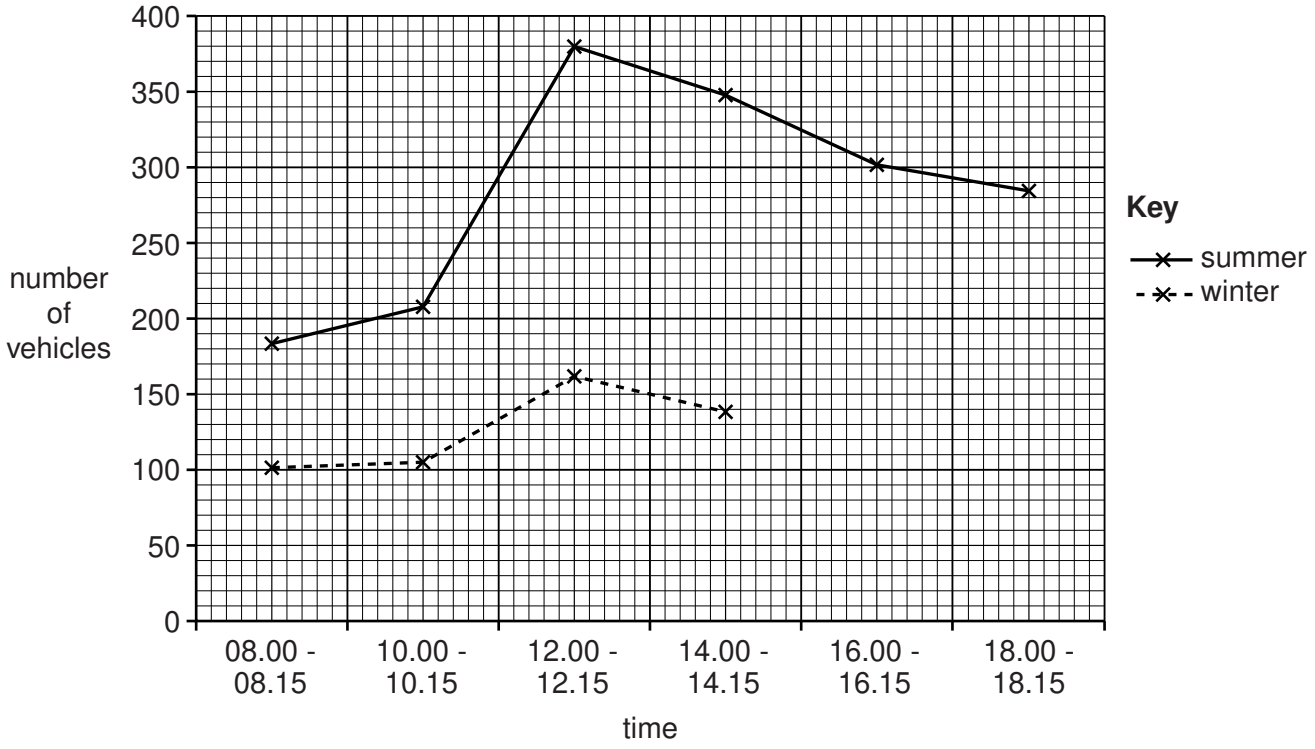


Fig. 4A

Traffic survey results at location Y

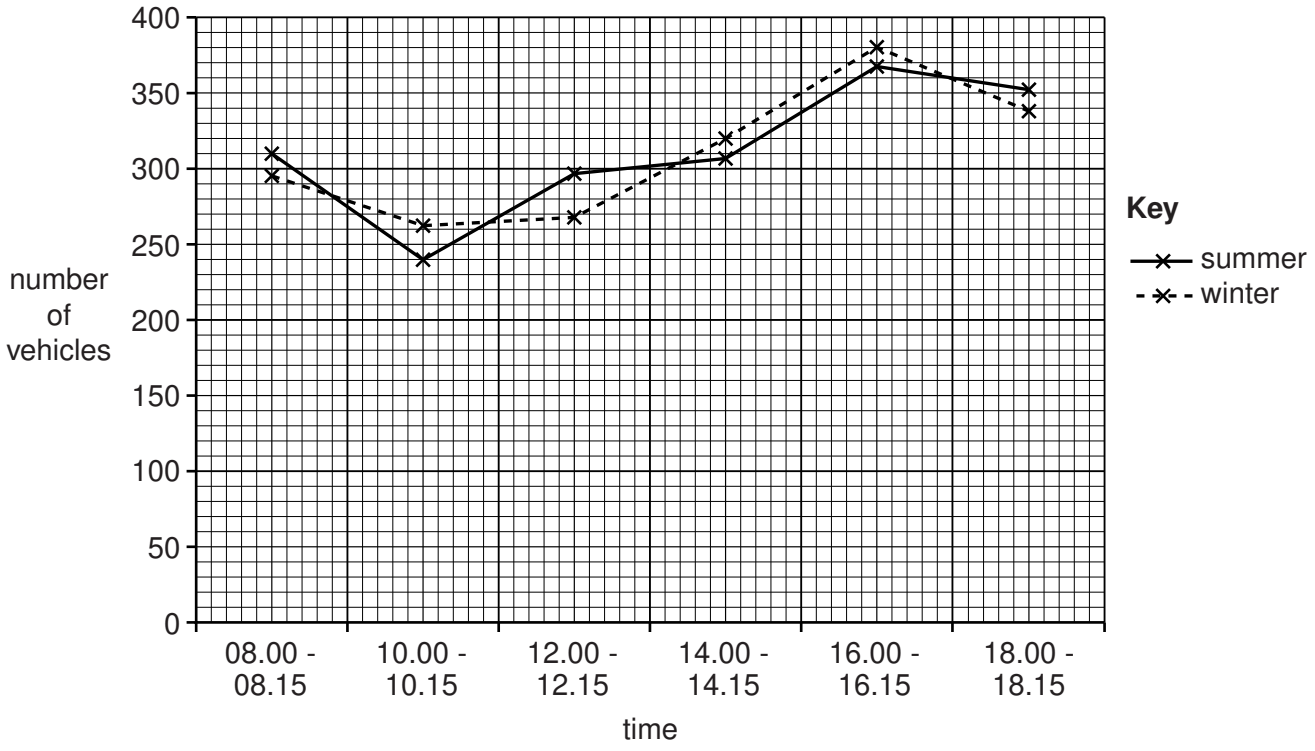


Fig. 4B

www.dynamicpapers.com

(iv) The students made the following conclusions about **Hypothesis 2:** *The amount of traffic is greater in summer than in winter because of tourism.*

The hypothesis is true at location **X**.

The hypothesis is false at location **Y**.

Support both of these conclusions with evidence from Figs 4A and 4B.

Location **X**

.....

.....

.....

.....

Location **Y**

.....

.....

.....

.....[4]

(v) Look again at Fig. 3 (Insert). Suggest why the results varied between locations **X** and **Y**.

.....

.....

.....

.....[2]

© UCLES 2015

www.dynamicpapers.com

(d) Some students decided to extend their fieldwork by finding out about methods of transport used to travel to the city. Three questions were suggested which are shown below.

Question	Question
1	What type of car do you drive?
2	Have you come here by car?
3	How have you travelled to the city?

The students decided that only Question 3 was suitable to ask people. Explain why the other two questions were rejected.

Question 1

.....

.....

Question 2

.....

.....[2]

[Total: 30 marks]

© UCLES 2015

[Turn over

www.dynamicpapers.com

2 Students were planning fieldwork on a local pebble beach. The students wanted to investigate beach profiles and the action of longshore drift on the beach. Fig. 5 (Insert) shows the profiles of two beaches, one shaped by constructive waves and one shaped by destructive waves.

(a) Before the students began their fieldwork their teacher suggested that they needed to prepare for their visit to the beach.

Use arrows to match the statements in columns **P** and **Q** in the tables below which show examples of preparations that were made.

P
Check the times of high tide
Work in groups of three or four
Charge up their mobile (cell) phone
Check the weather forecast

Q
to wear appropriate clothing and take sunblock
to communicate with their teacher if they have a problem
to know when it will be safe to make measurements on the beach
to complete all their tasks and check their measurements

[3]

The students decided to investigate the following hypotheses:

Hypothesis 1: *The local beach is shaped by constructive waves.*

Hypothesis 2: *Longshore drift along the beach is from west to east.*

(b) The students had learned that beach profiles can be different if affected by constructive or destructive waves.

Tick (✓) the correct statement to complete each of the following sentences about the two types of wave.

In a constructive wave

	Tick (✓)
backwash is stronger than swash	
backwash and swash are of equal strength	
swash is stronger than backwash	

The wave frequency of a destructive wave is

	Tick (✓)
less than 13 waves per minute	
exactly 13 waves per minute	
more than 13 waves per minute	

[2]

© UCLES 2015

www.dynamicpapers.com

(c) (i) Describe a method the students could use to measure wave frequency.

.....

.....

.....

.....

.....

.....[3]

(ii) The results of the students' measurements are shown in Table 3 below.

Table 3

Results of students' measurements

Measurement number	Waves per minute
1	7
2	8
3	7
4	9
5	6
6	8
7	7
8	10
9	8
10	6
Average	

Calculate the average number of waves per minute. Insert your answer into Table 3. [1]

© UCLES 2015

[Turn over

www.dynamicpapers.com

(d) Fig. 6 (Insert) shows a method of measuring a beach profile.

(i) Describe the method shown.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(ii) The students used their measurements to complete the beach profile shown in Fig. 7 below.

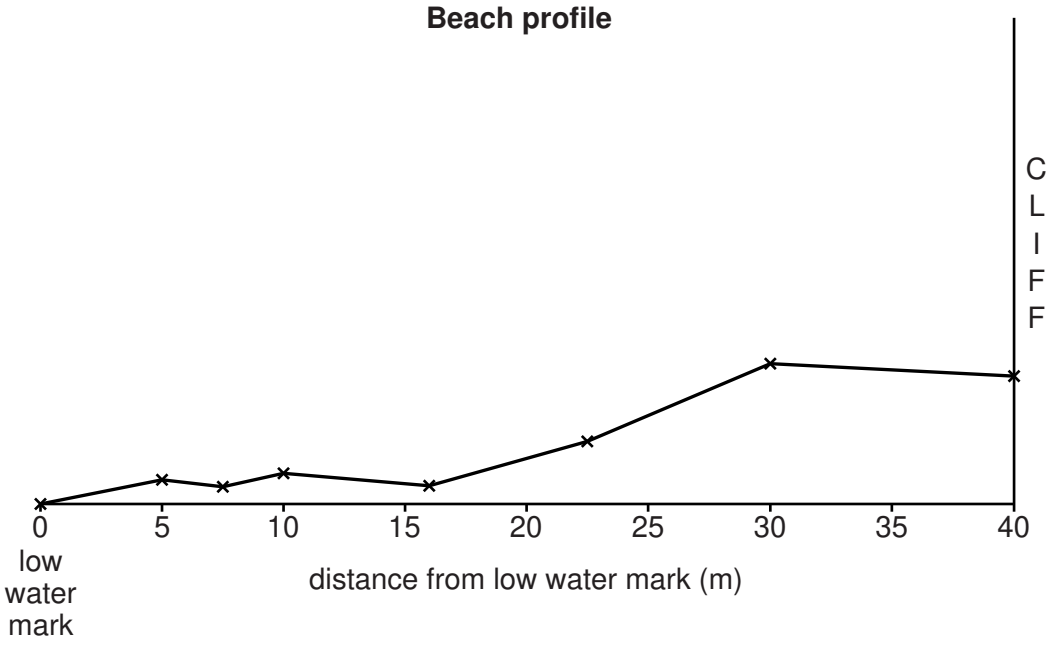


Fig. 7

© UCLES 2015

www.dynamicpapers.com

The students decided that **Hypothesis 1:** *The local beach is shaped by constructive waves* was correct. Why did the students reach this decision? Support your answer with evidence from Table 3 and Fig. 7. Look again at Fig. 5 (Insert) to help you to answer.

.....

.....

.....

.....

.....[3]

(e) (i) Movement of pebbles along the beach is by longshore drift. The students had learned that the direction of longshore drift is usually related to the wind direction.

Describe a simple method the students could use to work out the wind direction at the beach.

.....

.....

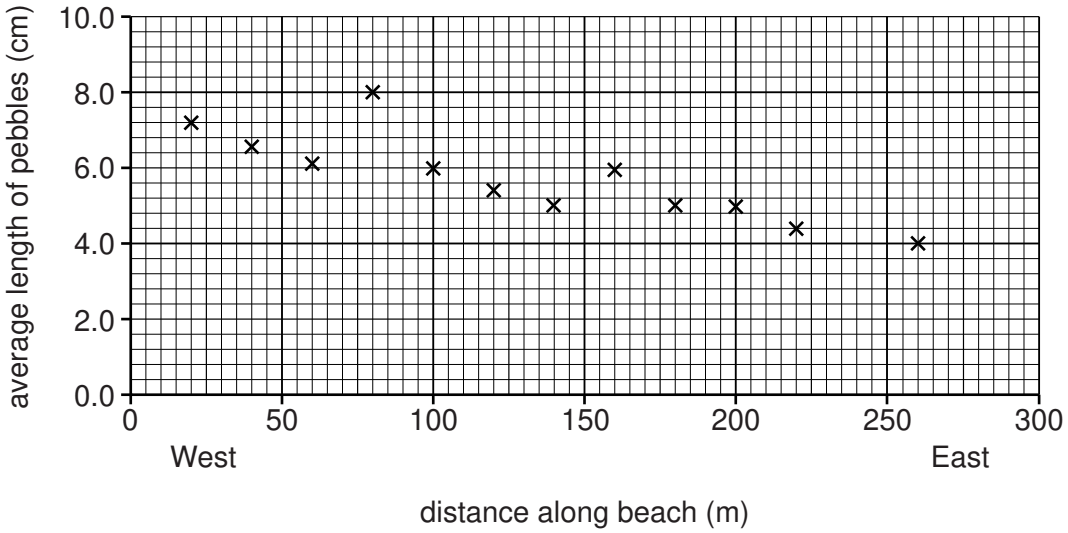
.....

.....[2]

(ii) To investigate **Hypothesis 2:** *Longshore drift along the beach is from west to east*, the students stretched a tape measure along the beach near to the sea and randomly selected 20 pebbles every 20 metres. They then measured the length of the pebbles and calculated the average length at each point. Their results are shown in Table 4 (Insert).

Use these results to plot the average length of pebbles at 0 m and 240 m on Fig. 8 below. [2]

Results of pebble measurements



Key

× average length of 20 pebbles (cm)

Fig. 8

© UCLES 2015

[Turn over

www.dynamicpapers.com

(iii) Smaller and lighter pebbles are carried more easily by waves than large heavy pebbles, so smaller pebbles are often carried further by longshore drift. Do these results support **Hypothesis 2:** *Longshore drift along the beach is from west to east*? Use evidence from Fig. 8 and Table 4 to support your answer.

.....

.....

.....

.....

.....

.....[3]

(iv) Describe another method the students could have used to measure longshore drift along the beach.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(f) Cliffs at the back of a nearby beach are shown in Photograph A (Insert).

Suggest reasons why there is rock debris at the base of the cliffs.

.....

.....

.....

.....

.....

.....[3]

[Total: 30 marks]

© UCLES 2015

www.dynamicpapers.com

BLANK PAGE

© UCLES 2015

www.dynamicpapers.com

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.