Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

4703914669

GEOGRAPHY **0460/41**

Paper 4 Alternative to Coursework **October/November 2020**

1 hour 30 minutes

You must answer on the question paper.

You will need: Insert (enclosed) Ruler
Calculator

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.
- 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 **16** pages. Blank pages are indicated.

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1 Students in Italy were studying population migration. They decided to do a fieldwork investigation about migration into their country.

(a) Before they began their fieldwork they revised key terms to do with migration.

(i) Match the types of migrant with the correct description. One has been completed for you.

Type of migrant	Description
asylum seeker	moves to live in a different country for at least one year
internal migrant	leaves the country of origin because of fear or persecution and asks for permission to stay in a different country
international migrant	forced to leave the country because of fear they may die but does not plan which country to move to
refugee	moves to live in a different place in the same country

[2]

(ii) Explain the difference between *push* and *pull* migration factors.

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.....

..... [2]

(b) The students visited a local town on the coast near Rome to use a questionnaire with 40 migrants who had recently arrived in Italy. The questionnaire is shown in Fig. 1.1 (Insert).

(i) They used a random sampling method to select people to complete the questionnaire. Describe this method of sampling.

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..... [2]

(ii) Suggest **three** difficulties of using the questionnaire with migrants.

1 .....

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2 .....

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3 .....

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[3]

The students wanted to test the following hypotheses:

Hypothesis 1: *Most migrants come from Africa*.

Hypothesis 2: *Pull factors affect the decision to migrate more than push factors*.

(c) The answers to Question 1 in the questionnaire *(In which country were you born and brought up?)* are shown in Table 1.1 (Insert).

(i) Use the results to **draw the bar** for Eritrea in Fig. 1.2 below. [1]

Countries in which migrants were born and brought up

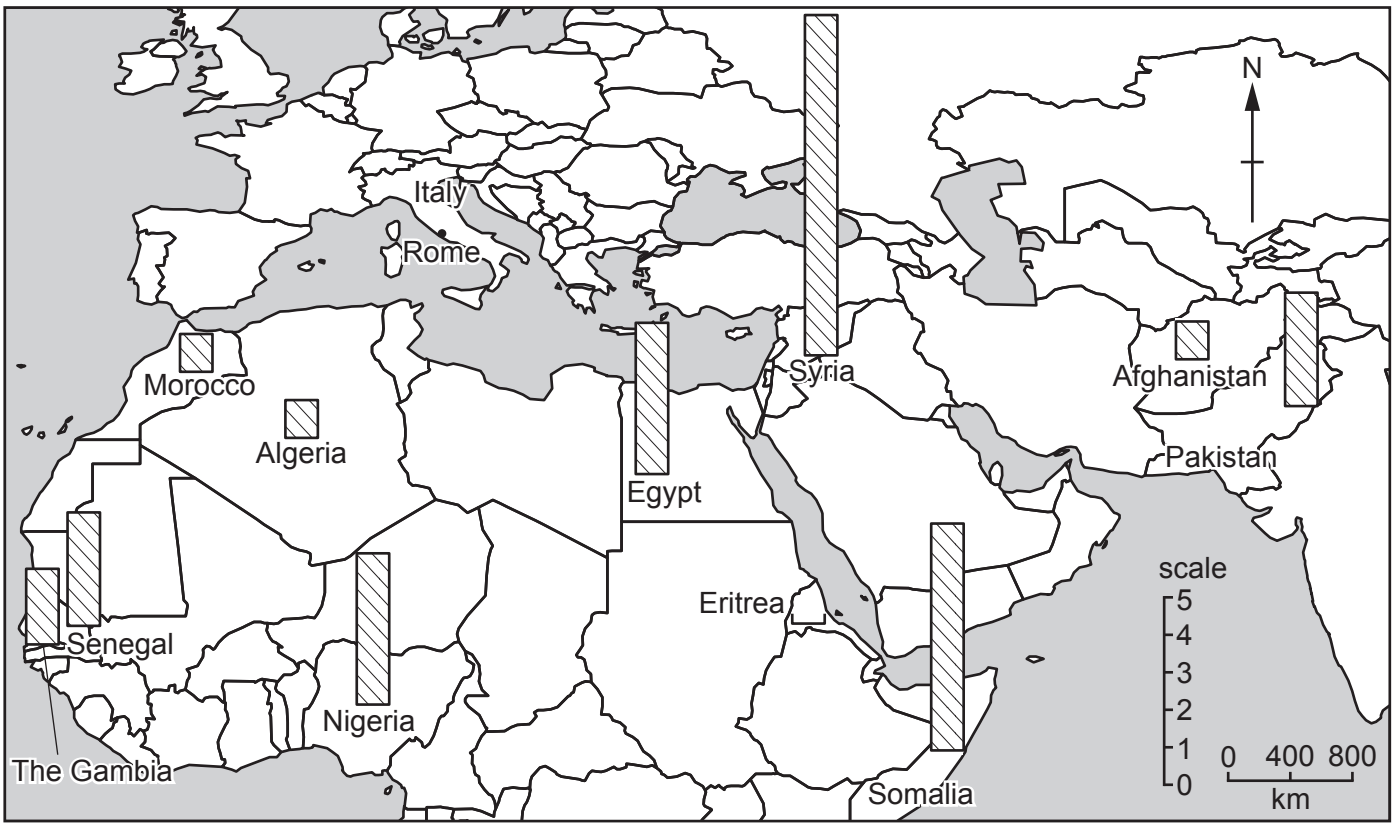


Fig. 1.2

(ii) What conclusion would the students make about **Hypothesis 1:** *Most migrants come from Africa*? Support your answer with evidence from Fig. 1.2 and Table 1.1.

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..... [2]

(iii) The students compared their results to Question 1 with secondary data collected five years earlier. What is meant by *secondary data*?

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..... [1]

(iv) The earlier results are shown in Table 1.2 (Insert). Identify **two** differences between the results in the different years.

1 .....

.....

2 .....

.....
[2]

(d) (i) Table 1.3 (Insert) shows the results of Question 2 in the questionnaire *(Which one is the most important reason why you migrated to Italy?)*. Use the results from Table 1.3 to **draw and label the divided bar graph** for the push factors in Fig. 1.3 below. [3]

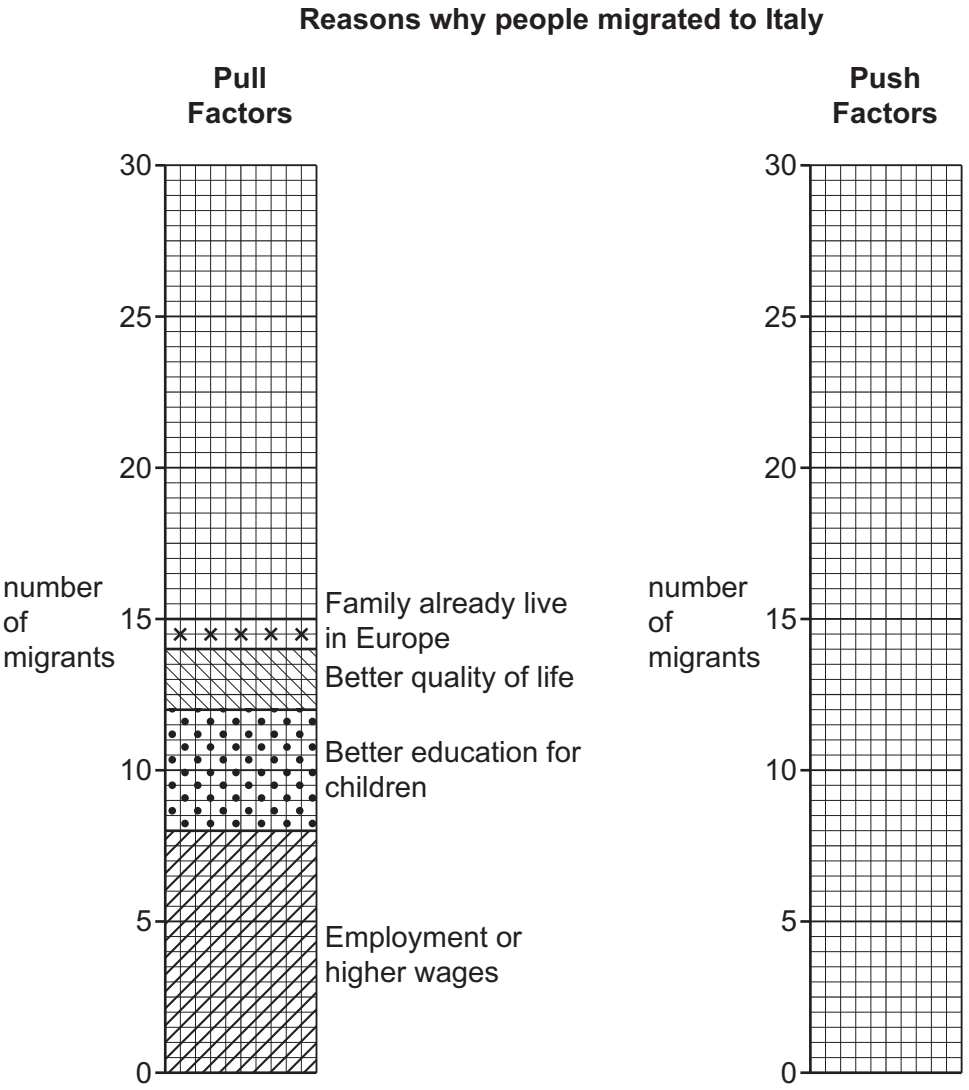


Fig. 1.3

(ii) Do you agree with **Hypothesis 2:** *Pull factors affect the decision to migrate more than push factors*? Use evidence from Fig. 1.3 and Table 1.3 to support your decision.

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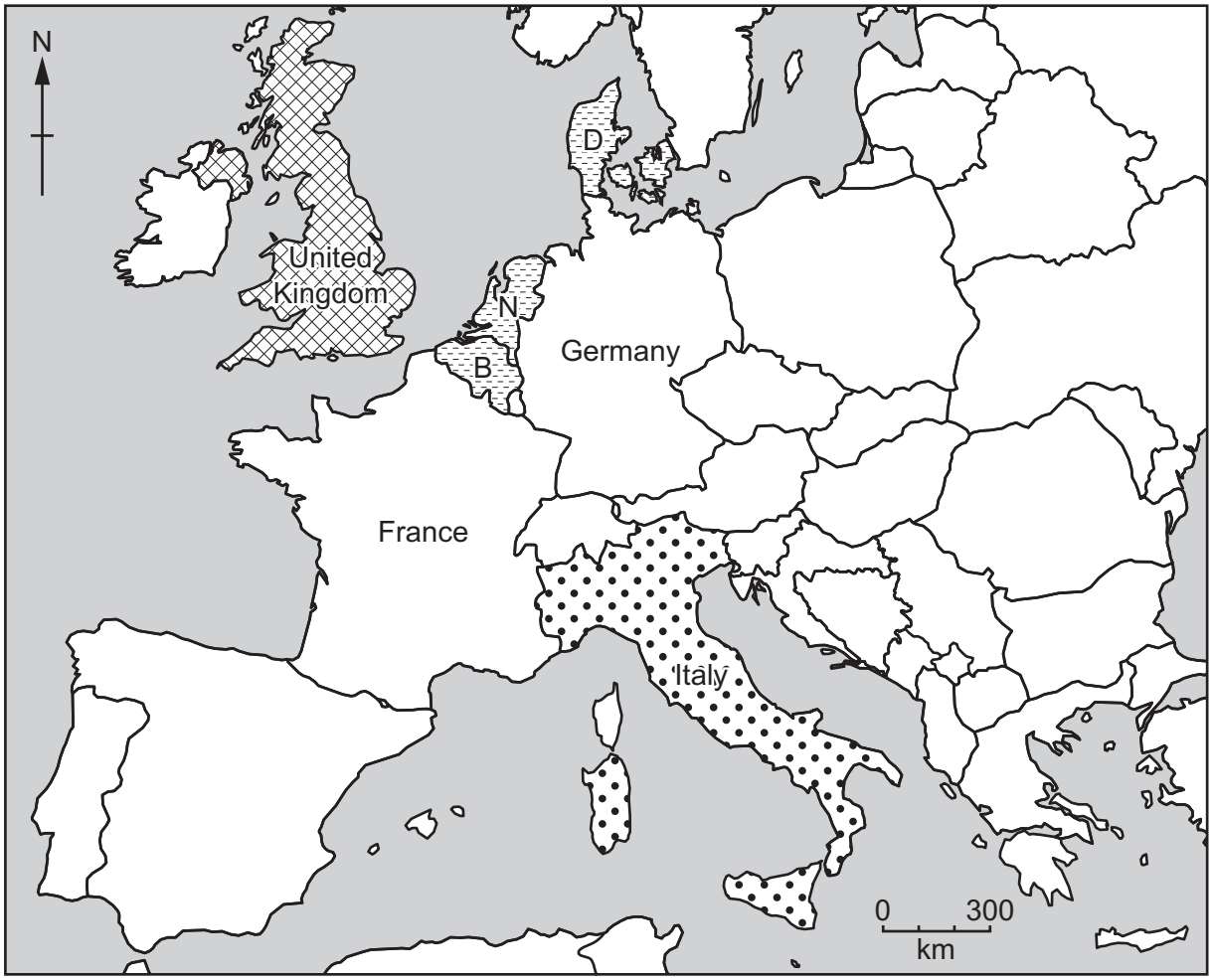
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..... [3]

(e) (i) The results of Question 3 in the questionnaire *(Which country is your final intended destination?)* are shown in Table 1.4 (Insert). Use the results to **plot the data** for Germany and France in Fig. 1.4 below. [2]

Final intended destinations of migrants



Key

number of migrants

13 – 16

9 – 12

5 – 8

1 – 4

B = Belgium

N = Netherlands

D = Denmark

Fig. 1.4

(ii) The answers to Question 3 suggest that migration is done in stages. Put the following countries in the correct order in the boxes below to show the stages of a typical migration.

- Italy
- Somalia (shown in Fig. 1.2)
- United Kingdom

	to		to	

[1]

(iii) Suggest why migration takes place in stages.

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.....

..... [2]

(f) Give **two** advantages and **two** disadvantages of **immigration** for an MEDC such as Italy.

Advantages

1 .....

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2 .....

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Disadvantages

1 .....

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2 .....

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[4]

[Total: 30]

2 Students were studying the Bradshaw model which describes how the characteristics of a river change downstream.

(a) The table below summarises some of these characteristics. Add the following characteristics to the correct column in the table.

amount of load carried by the river

river discharge

size of individual load particles

Increase further downstream	Decrease further downstream
channel width and depth	roughness of the channel bed

[2]

The students decided to investigate two other river characteristics included in the Bradshaw model by testing the following hypotheses:

Hypothesis 1: *River velocity increases downstream*.

Hypothesis 2: *The gradient of the river bed decreases downstream*.

(b) The students carried out their fieldwork at six sites along the river.

(i) Suggest **three** factors the students should have considered in choosing their fieldwork sites.

1 .....

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2 .....

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3 .....

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[3]

(ii) The students made all their measurements on the same day. Suggest why this was important.

.....

..... [1]

(c) (i) To investigate **Hypothesis 1:** *River velocity increases downstream*, the students used the following equipment:

float	stop-watch
tape measure	two ranging poles

Describe how the students used this equipment to measure river velocity.

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..... [4]

(ii) The results of the fieldwork are shown in Table 2.1 (Insert). **Plot the results** for sites 5 and 6 in Fig. 2.1 below. [2]

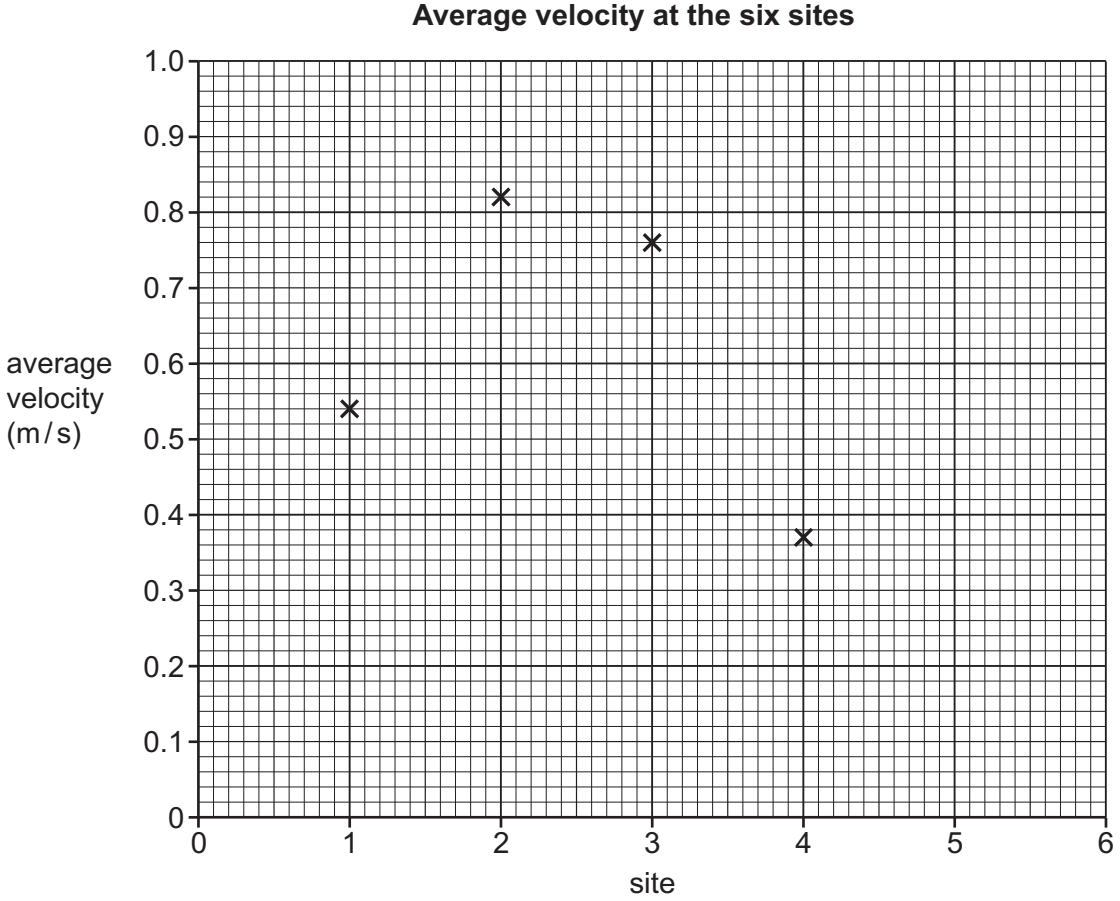


Fig. 2.1

(iii) What conclusion could the students make about **Hypothesis 1:** *River velocity increases downstream*? Support your decision with evidence from Fig. 2.1 and Table 2.1.

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..... [3]

(d) (i) To test **Hypothesis 2:** *The gradient of the river bed decreases downstream*, the students used the method shown in Fig. 2.2 (Insert). Describe how they measured gradient.

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..... [4]

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[Turn over

(ii) The results of the gradient measurements are shown in Table 2.1 (Insert). A student used the method in Fig. 2.3 on page 13 to draw the gradient at each site. Use this method **to show the gradient** at site 5. [1]

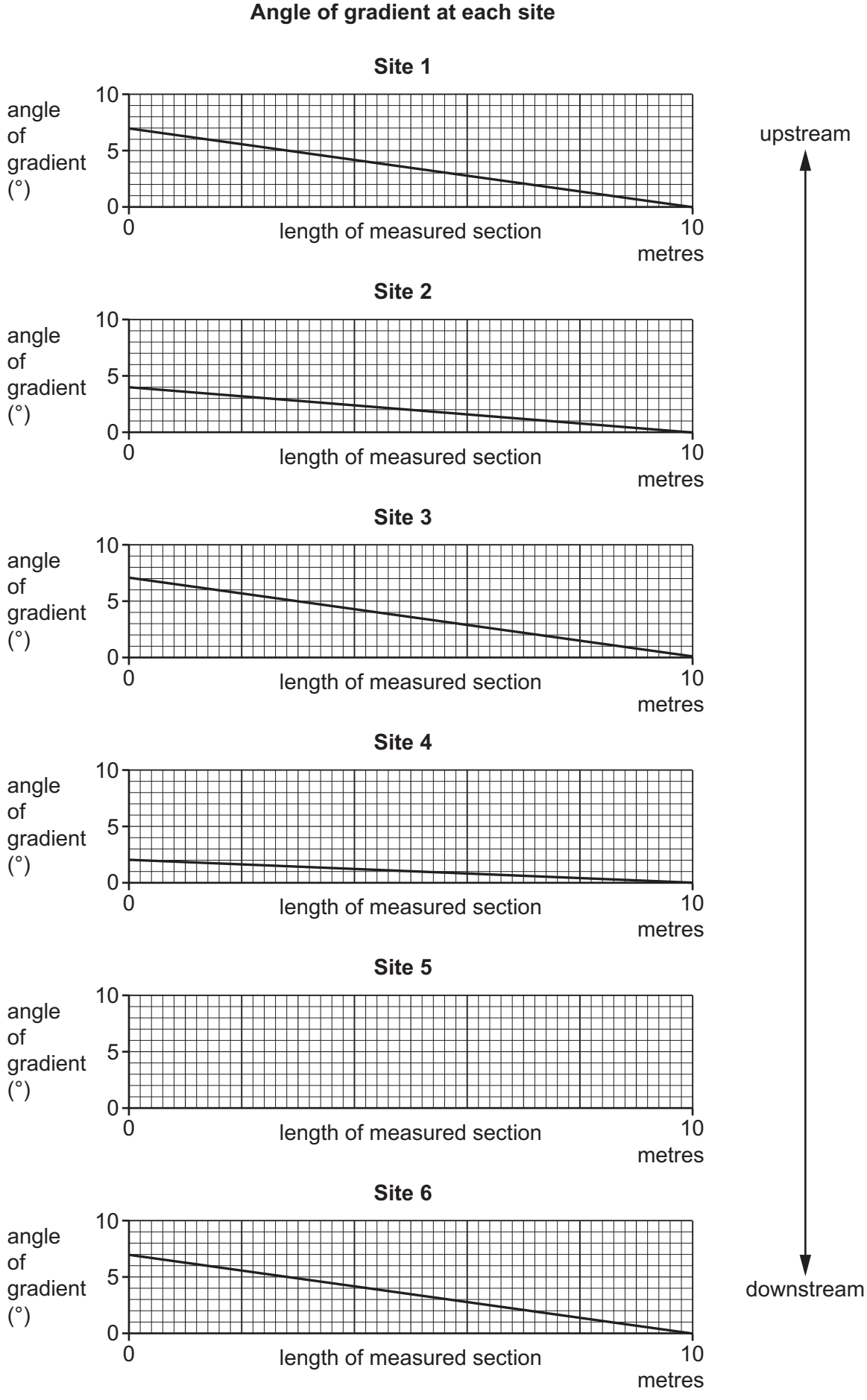

Angle of gradient at each site
Site 1
Site 2
Site 3
Site 4
Site 5
Site 6
angle of gradient (°)
10
5
0
0
length of measured section
10
metres
upstream
downstream

Fig. 2.3

(iii) Which conclusion would the students make about **Hypothesis 2:** *The gradient of the river bed decreases downstream*? Tick (✓) your decision below and support it with evidence from Fig. 2.3 and Table 2.1.

	Tick (✓)
Hypothesis 2 is true	
Hypothesis 2 is partly true	
Hypothesis 2 is false	

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..... [3]

(e) When they returned to school the students evaluated their data collection methods. Suggest **three** improvements they could have made to increase the reliability of the velocity and gradient measurements.

1 .....

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2 .....

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3 .....

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[3]

(f) The students decided to investigate another characteristic included in the Bradshaw model. Describe how they could measure channel size (width and depth) at different sites downstream.

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..... [4]

[Total: 30]

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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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