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Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

5561596678

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **February/March 2025**

1 hour 30 minutes

You must answer on the question paper.

You will need: Insert (enclosed)
Calculator
Protractor
Ruler

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 page 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.

LEDCs – Less Economically Developed Countries
MEDCs – More Economically Developed Countries

This document has **16** pages. Any blank pages are indicated.

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1 Students in an upland area of the UK did fieldwork on a river. They wanted to find out if the river characteristics changed downstream.

(a) Which **two** of the following factors would be important considerations when choosing their fieldwork sites? Tick (✓) your choices.

factor	tick (✓)
The river current must be fast flowing.	
Each fieldwork site is on a meander in the river.	
The river is shallow enough to stand safely in.	
The river channel is natural and **not** changed by people.	
The fieldwork sites are all on the river flood plain.	

[2]

The students decided to investigate the following hypotheses:

Hypothesis 1: *The river channel gets wider and deeper at each site downstream.*

Hypothesis 2: *The bedload becomes smaller downstream.*

(b) Before they went on their field trip, the students did a pilot (practice) study on a stream near the school.
Suggest **two** ways that this would help them to prepare for their fieldwork.

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[2]

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(c) To investigate **Hypothesis 1**: *The river channel gets wider and deeper at each site downstream*, the students measured the width of the river channel and the depth of the river at points across the channel at five fieldwork sites.

(i) Which equipment did they use to measure the **width** of the river channel? Tick (✓) your choice.

equipment	tick (✓)
clinometer and ranging poles	
floating object and stopwatch	
flowmeter and stopwatch	
tape measure and ranging poles	

[1]

(ii) The students measured the **depth** of the river channel. Draw an annotated (labelled) diagram in the following space to show how they did this. [4]

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(d) The results of the students' fieldwork at site 3 are shown in Table 1.1 (Insert).

(i) Use these results to **complete and shade in the cross-section** of the river channel at site 3 on Fig. 1.1. [3]

Cross-section of the river channel

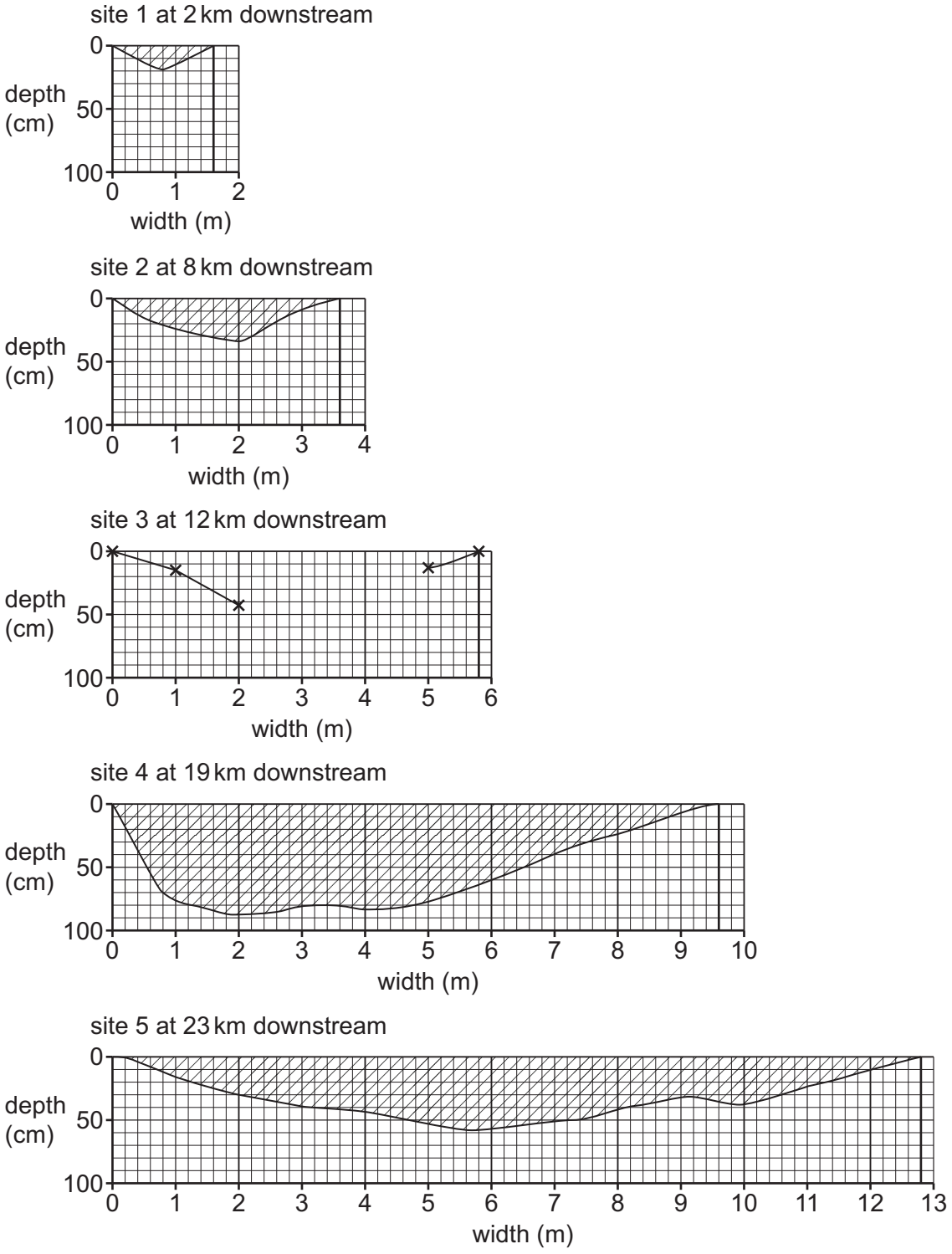


Fig. 1.1

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(ii) What conclusion would the students make about **Hypothesis 1**: *The river channel gets wider and deeper at each site downstream*? Tick (✓) your decision and support it with evidence from Fig. 1.1.

	tick (✓)
The hypothesis is true for both width and depth.	
The hypothesis is true for depth but **not** for width.	
The hypothesis is true for width but **not** for depth.	
The hypothesis is false for both width and depth.	

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..... [3]

(e) To investigate **Hypothesis 2**: *The bedload becomes smaller downstream*, one student suggested that they should pick 20 pebbles at random from the bed of the river at each site.

(i) Suggest **two** disadvantages of picking pebbles at random.

1 .....

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2 .....

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[2]

(ii) Taking advice from their teacher, the students decided to collect their sample of 20 pebbles from equal distances across the river bed. What is this sampling method called?

..... sampling [1]

(iii) The students used a ruler to measure the longest side of each pebble. Their results at site 4 are shown in Table 1.2 (Insert). Use these results to **complete the histogram for site 4** in Fig. 1.2. [2]

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Length of pebbles at each site

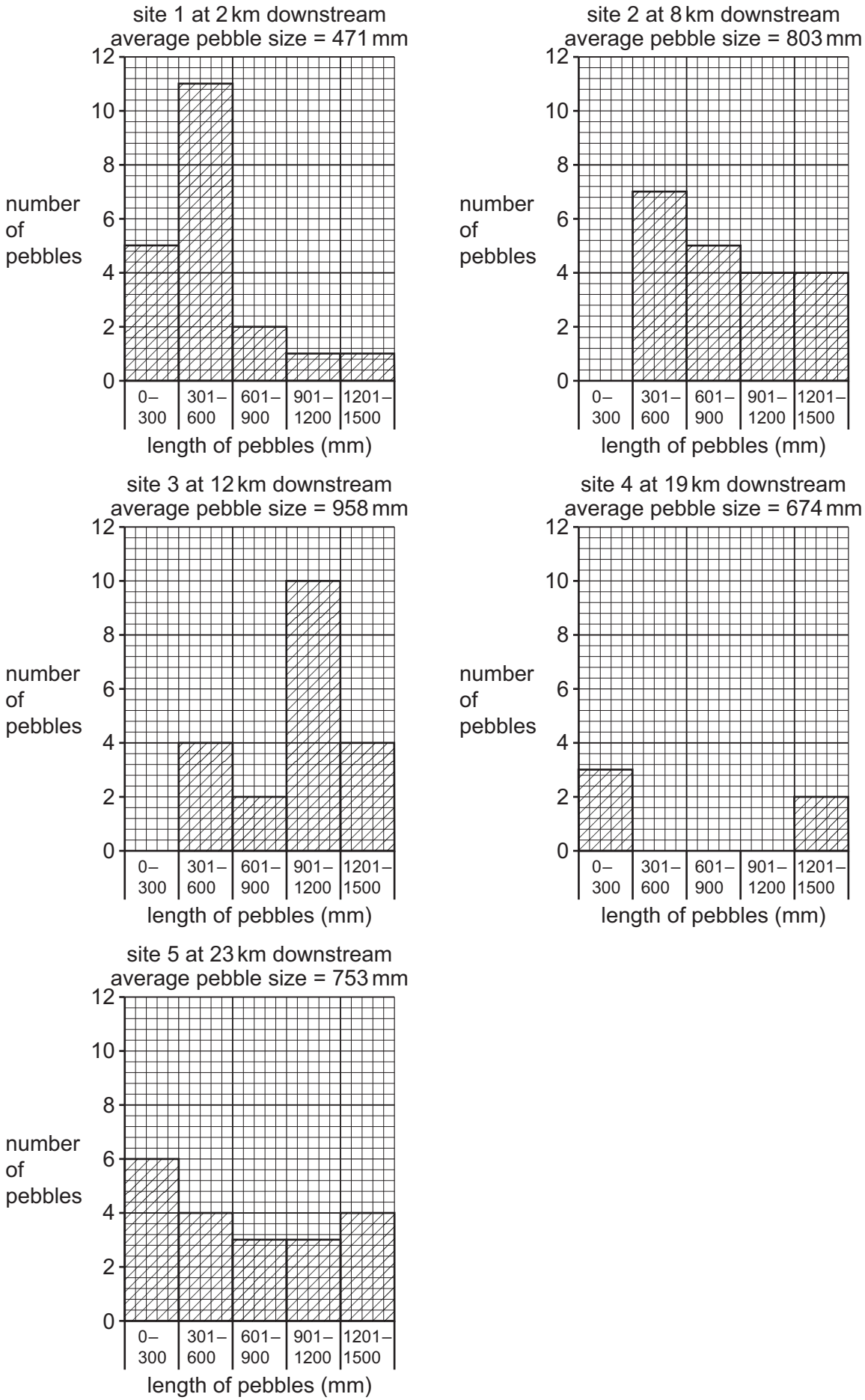


Fig. 1.2

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(iv) Do the results agree with **Hypothesis 2**: *The bedload becomes smaller downstream*? Support your decision with evidence from Fig. 1.2.

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(v) Explain why pebbles on the river bed (bedload) vary in size along the course of a river.

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(f) Suggest how the students could have improved their methods of data collection to test both hypotheses.

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2 Students in Dubai, in the United Arab Emirates, did fieldwork in the Dubai Mall, a very large shopping area.

Some students decided to test the following hypotheses:

Hypothesis 1: *Most of the shops in the Dubai Mall sell high-order or specialist goods.*

Hypothesis 2: *The number of people visiting the Dubai Mall varies.*

(a) To investigate **Hypothesis 1**, the students used the fieldwork method shown in Fig. 2.1.

Extract from a student's fieldwork notes about the method

Method

My group got a map which showed the different shops and services in the Dubai Mall. We walked round the Mall and checked that the shops were still the same as on the map. We then classified the shops and services into five different types.

type	classification
A	shops which sell high-order or specialist goods
B	shops which sell low-order or everyday goods
C	shops which sell clothes and shoes
D	shops which provide services
E	shops which are restaurants and other places to eat

Fig. 2.1

(i) In which type (A to E) would the students have included

- a hairdressers and beauty salon?

  type .....

- a jewellers?

  type .....

[2]

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(ii) Which **one** of the following **best** describes the shops in type A? (Circle) your answer.

business comparison convenience department public [1]

(iii) The results of the students' classification are shown in Table 2.1 (Insert). Use these results to **complete the pie graph** in Fig. 2.2. [2]

Results of students' classification

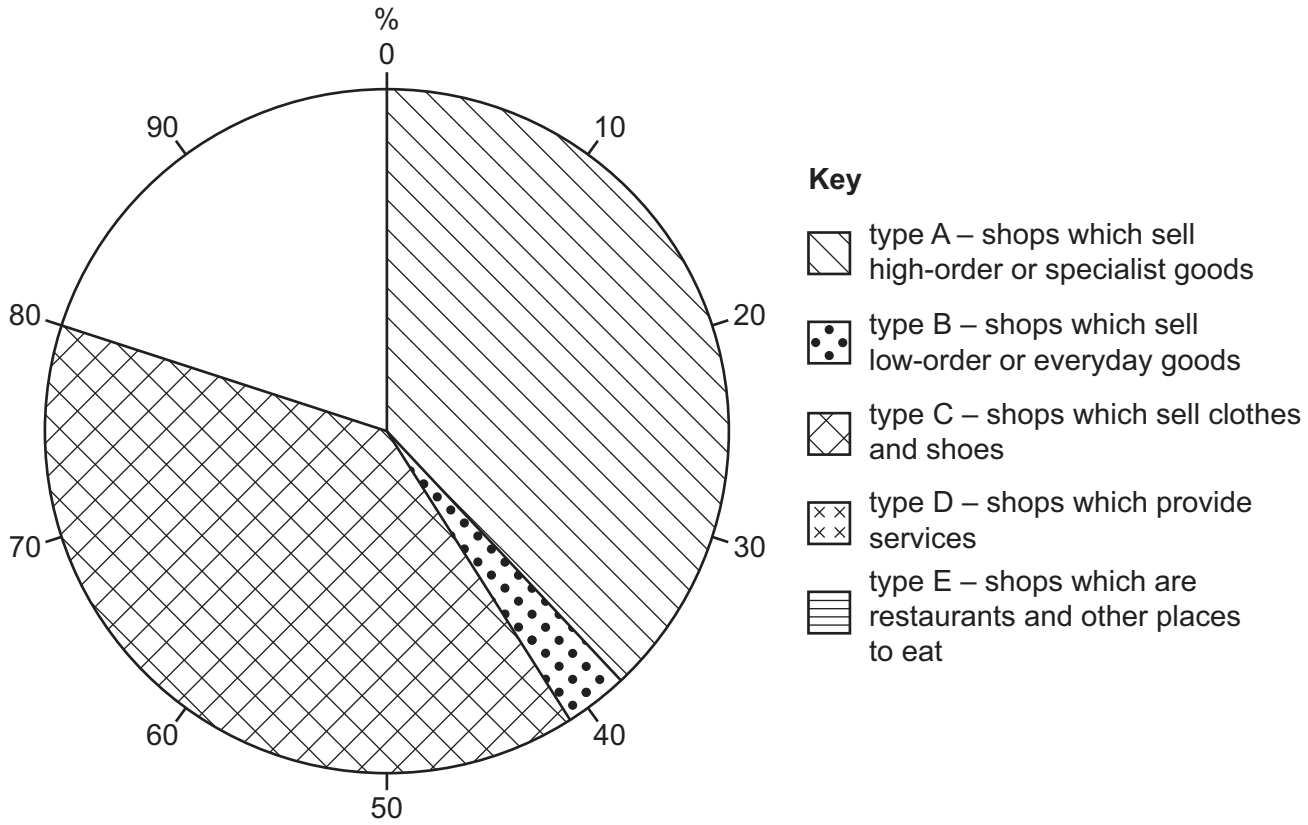


Fig. 2.2

(iv) What conclusion would the students make about **Hypothesis 1**: *Most of the shops in the Dubai Mall sell high-order or specialist goods*? Support your decision with data from Fig. 2.2 and Table 2.1.

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(b) To investigate **Hypothesis 2**: *The number of people visiting the Dubai Mall varies*, the students did pedestrian counts in the Mall on two days.

(i) Fig. 2.3 (Insert) shows one student's suggested method to do the pedestrian count. Using evidence from Fig. 2.3 **only**, suggest **three** reasons why the results of the method would be unreliable.

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[3]

(ii) Describe the correct way that the students should plan and do the pedestrian count to get reliable results.

Plan the pedestrian count

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Do the pedestrian count

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(iii) The students' results of a reliable pedestrian count are shown in Table 2.2 (Insert). Use the results to **plot the number of people counted at 21:00 (9 pm) on Wednesday (day 1) and Saturday (day 2)** on Fig. 2.4. [2]

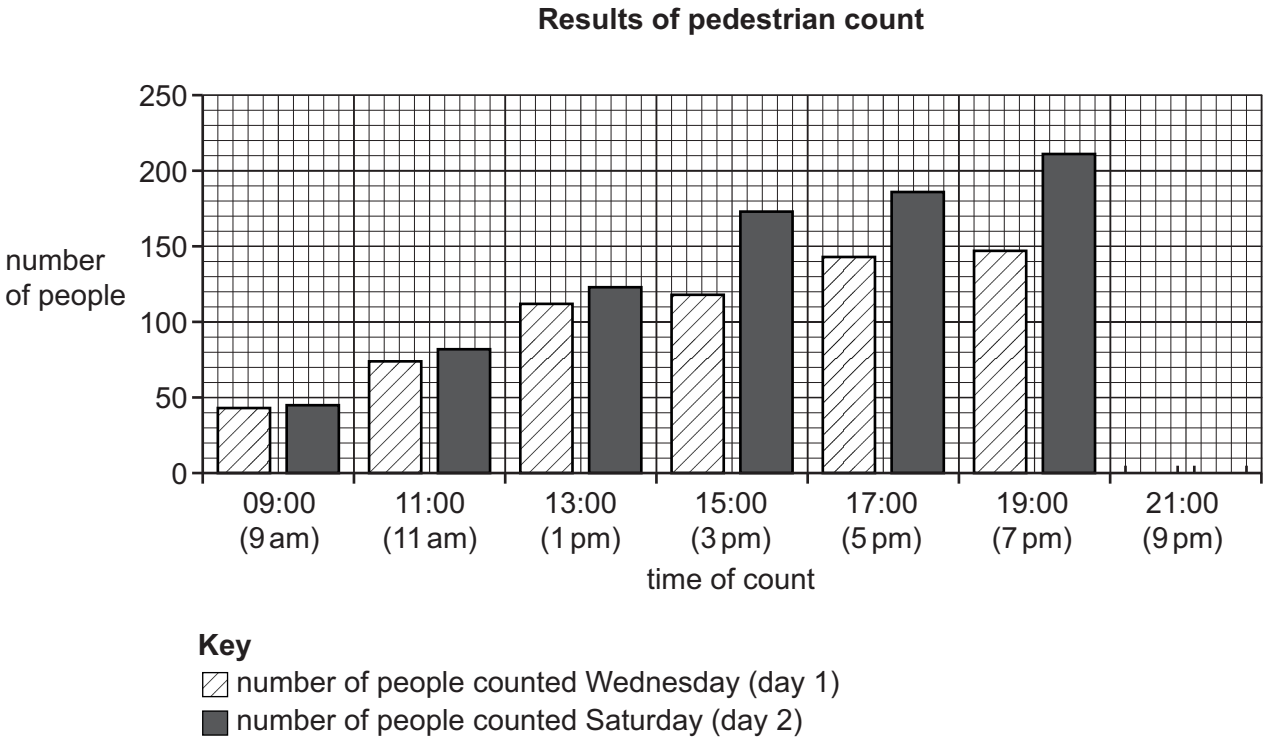


Fig. 2.4

(iv) The students concluded that **Hypothesis 2**: *The number of people visiting the Dubai Mall varies* was **true**. Use evidence from Fig. 2.4 and Table 2.2 to support their decision.

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(c) Other students decided to test different hypotheses. They used a questionnaire with people in the Dubai Mall. The questionnaire is shown in Fig. 2.5 (Insert).

Suggest some advice that the teacher would give the students about how to **use** this questionnaire with people at the Mall.

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(d) The results of question 1 in the questionnaire (*What is the main reason you come to the Dubai Mall?*) and question 2 in the questionnaire (*How frequently do you visit the Dubai Mall?*) are shown in Table 2.3 (Insert).

(i) **Complete the divided bar** to show the number and frequency of visits to eat in a restaurant on Fig. 2.6. [2]

Results of questions 1 and 2 in the questionnaire

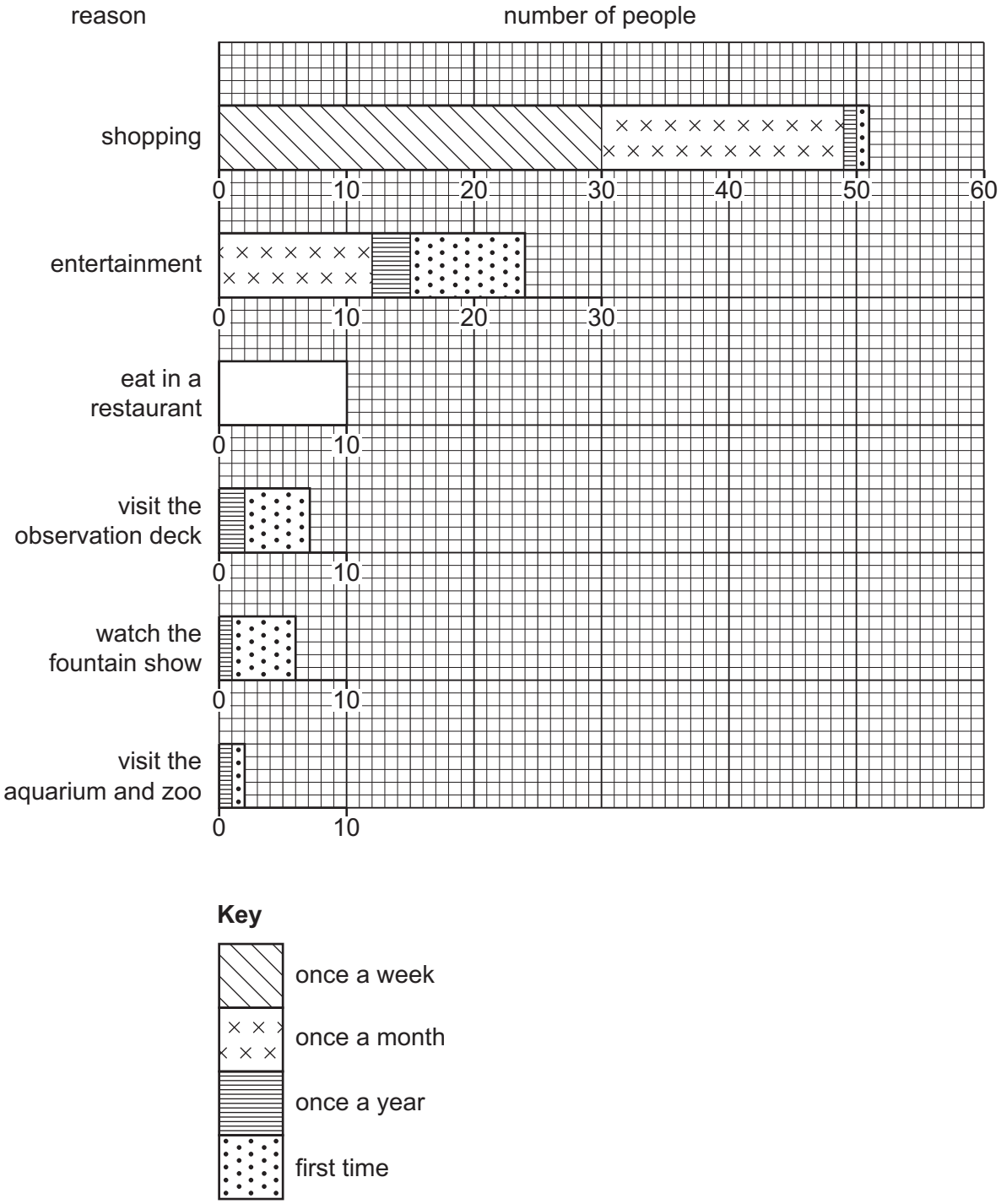


Fig. 2.6

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(ii) Compare the number of people going to the Mall and the frequency of visits for shopping and entertainment. Do **not** use statistics in your answer.

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(iii) The results of question 3 in the questionnaire (*How did you travel to the Dubai Mall today?*) are shown in Table 2.4 (Insert).

Suggest **three** factors which may affect people's method of travel to a shopping centre.

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Additional page

If you use the following page to complete the answer to any question, the question number must be clearly shown.

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