Centre Number	Candidate Number	Candidate Name

NAMIBIA SENIOR SECONDARY CERTIFICATE

GEOGRAPHY ORDINARY LEVEL 6137/3

PAPER 3 2 hours

Marks 60 **2022**

Additional Materials: Non-programmable calculator
Protractor
Ruler

INSTRUCTIONS AND INFORMATION TO CANDIDATES

- Write your Centre Number, Candidate Number and Name in the spaces at the top of this page.
- Candidates answer on the Question Paper 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 correction fluid.
- Do not write in the margin *For Examiner's Use.*

- Answer **all** questions.

- All working must be clearly shown.
- Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.
- The number of marks is given in brackets [ ] at the end of each question or part question.
- You may use a non-programmable calculator.

For Examiner's Use		
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Total		

Marker		
Checker		

This document consists of **16** printed pages.

Republic of Namibia

MINISTRY OF EDUCATION, ARTS AND CULTURE

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1 A group of students investigated the weather every day at 08:00 during one week in December at their school. The hypothesis used by the students was:

The temperature in the school grounds varies throughout the year.

(a) The maximum and minimum thermometer (Six's thermometer) was kept in a Stevenson Screen as seen in Fig. 1.

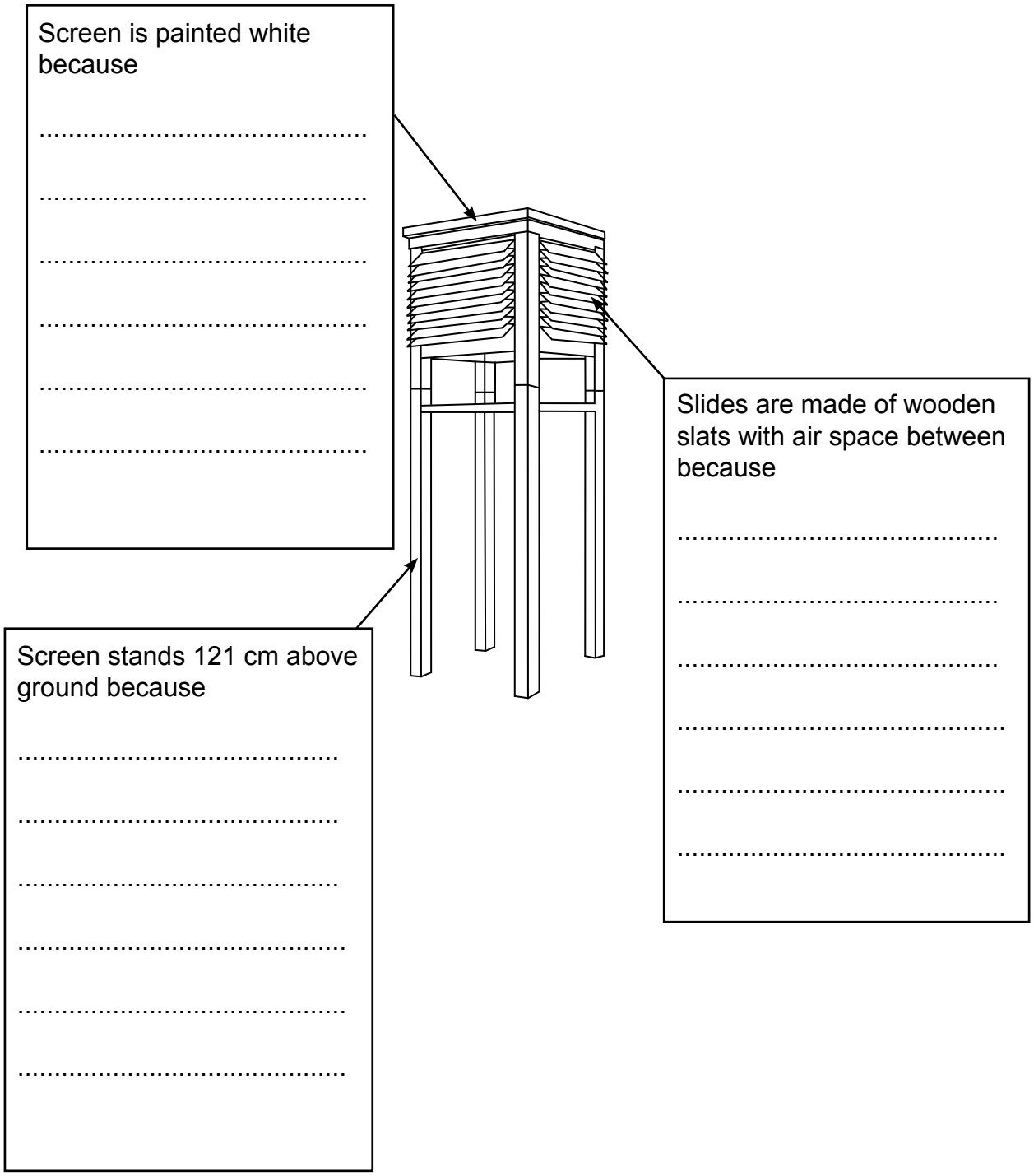

Fig. 1

(i) For each characteristic of the Stevenson Screen labelled on Fig. 1, state a possible reason for the design in the space provided on Fig. 1. [3]

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(ii) What are the maximum and minimum temperatures shown on the thermometer on Fig. 2?

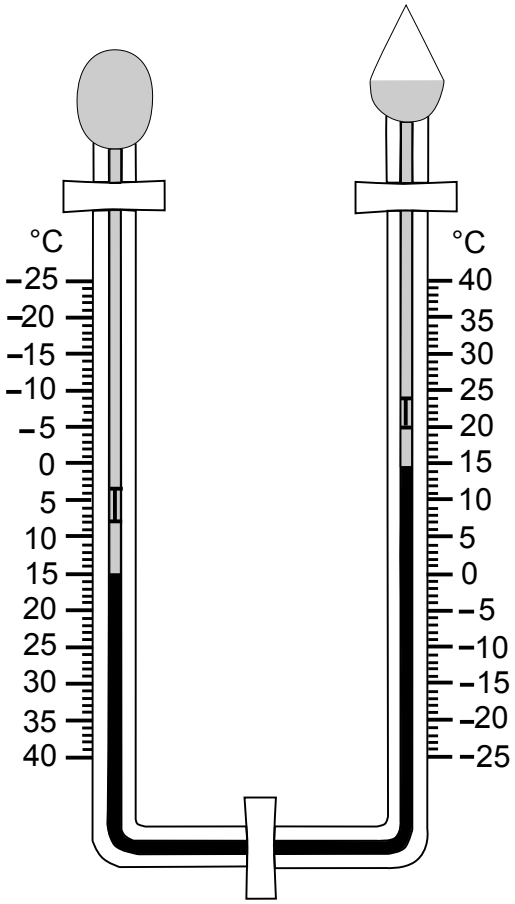

Fig. 2

Maximum.....

Minimum..... [2]

(iii) Suggest why the temperature was recorded daily at 08:00.

..... [1]

(b) The results recorded by the students are shown in Table 1.

Table 1

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Max. temperature (ºC)	24	26	31	34	25	26	24
Min. temperature (ºC)	14	15	18	18	18	15	12
Average daily December temperature (ºC)	19	20.5		26	21.5	20.5	18
Average daily July temperature (ºC)	13	11	13	11	12.5	13	12.5

(i) Calculate the average temperature for Wednesday in December and fill in the answer on the table in the space provided. [1]

(ii) Complete the graph Fig. 3, by plotting the minimum December temperature figures using the appropriate key. [3]

December maximum and minimum temperature

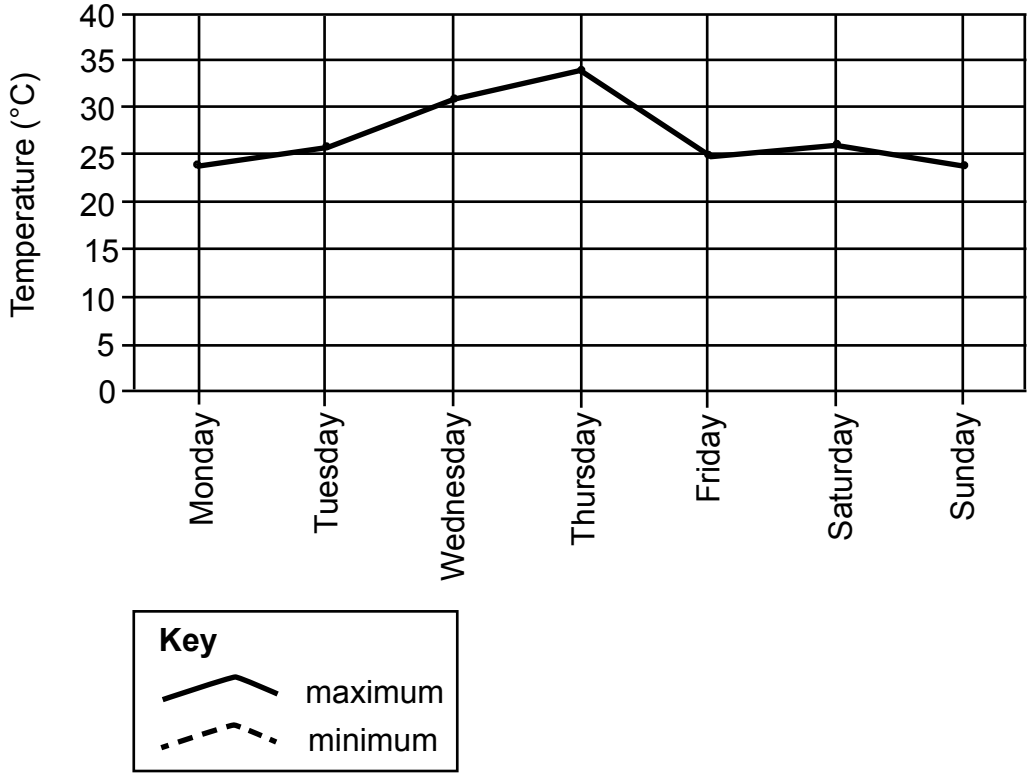

Fig. 3

(iii) Add labels to the graph to indicate

(aa) the highest temperature and the lowest temperature. [1]

(bb) the smallest daily temperature range. [1]

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(iv) Explain why calculating the average daily temperature is useful in the analysis of the data.

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..... [1]

(c) (i) Use both Fig. 3 and Table 1 to compare the temperatures on Monday and Thursday in December. You should support your comments with data.

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(ii) Suggest **one** reason why the temperature recorded on Monday and Thursday may not be representative of temperature in December.

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..... [1]

(d) The location of the school is on the 33ºS line of latitude, 10 km from the sea and 175 m above sea level. Explain in detail how the location of the school may influence the temperature recorded during the year.

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For Examiner's Use

(e) The students repeated the measurements for a week in July.

Study Table 1 again. Describe and explain the differences between the July and December average temperatures.

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..... [3]

(f) It was decided that the hypothesis and the investigation were too simple. Suggest practical methods by which the students may improve the weather investigation. You should include a new hypothesis, the use of other instruments, data collection times and the use of secondary sources.

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..... [4]

[30]

2 Four students decided to do an investigation into tourism in a village in a national park. They agreed to test the following hypotheses.

Hypothesis 1: *People of different ages have different reasons for visiting the area.*

Hypothesis 2: *Local residents believe that tourism has a negative impact on the area.*

To begin their investigation the students divided into two pairs to think of some questions to include in a questionnaire. The two questionnaires are shown in Figs 4 and 5.

Questionnaire 1

Good morning. I am a student looking at visitors to this area. I want to ask you some questions.

1 Why have you come here?

2 Have you been here before?

3 How long do you intend to stay here?

4 Where have you come from?

5 Do you like this national park?

6 How old are you?

Thanking your for your time.

Fig. 4

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Questionnaire 2

Good morning, I'm a student from a local school. Could you please answer the questions to help me complete my Geography fieldwork?

Male ☐ Female ☐

1 Which of the following age groups do you belong to?

Age ☐ Under 20 ☐ 20 - 35 ☐ 36 - 50

☐ 51 - 65 ☐ Over 65

2 How far have you travelled to get here today?

☐ 20 km or less ☐ 21 - 40 km ☐ 41 - 60 km

☐ 61 - 80 km ☐ More than 80 km

3 What is the main reason for your visit to this area today?

☐ Walking - less than 5 km ☐ Walking - more than 5 km

☐ Climbing ☐ Having a picnic

☐ Sightseeing ☐ Bird watching

☐ Cycling/mountain biking ☐ Horse riding

☐ Driving ☐ Running/jogging

☐ Shopping ☐ Visiting historic monument/building

☐ Other (please specify) .....

Thank you for your time.

Fig. 5

(a) (i) Give **three** ways that Questionnaire 2 (Fig. 5) is better than Questionnaire 1 (Fig. 4).

1 .....

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2 .....

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3 .....

..... [3]

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(i) The four students wanted to ask 100 people to complete the questionnaire in Fig. 5.

Name and describe a suitable sampling method for the students to select 100 people.

Name of sampling method .....

Description of method .....

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..... [3]

(ii) The students decided to put their questions to visitors returning to their cars before leaving the car park.

Suggest why they made this decision and **one** possible disadvantage of their decision.

Why they made the decision? .....

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Disadvantage .....

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..... [2]

For Examiner's Use

(b) The results from Fig. 5, Question 2 from the questionnaire are shown in Table 2.

Table 2

Results of Question 2:
How far have you travelled to get here today?

Distance (km)	Number of visitors
20 or less	8
21 – 40	16
41 – 60	19
61 – 80	26
more than 80	31

(i) Use the results in Table 2 to complete the pie chart, Fig. 6, below. [2]

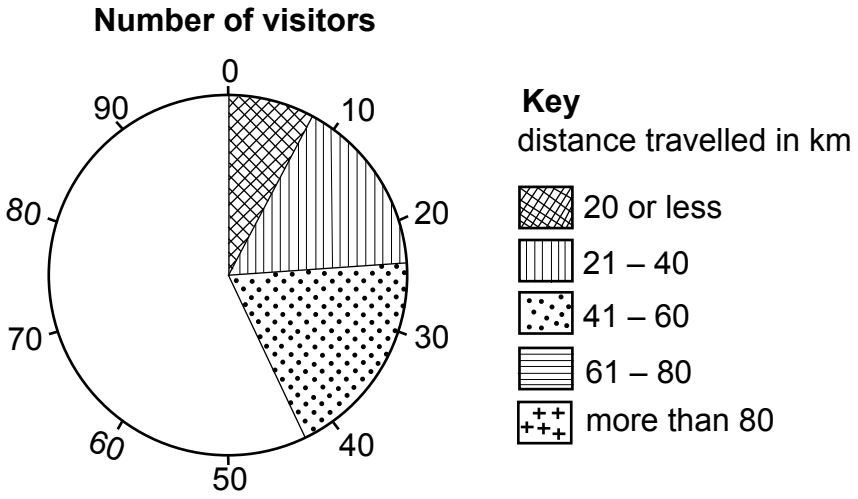

Fig. 6

(ii) Using the results of Question 2 from the questionnaire, identify **two** conclusions that the students could make about the distance travelled by visitors to the area.

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(iii) The results of Fig. 5, Question 3 are shown in Table 3, below, with the age groups of the people interviewed.

Complete Table 3 by:

(aa) Recording that 2 people aged 20 – 35 and 1 person aged over 65 were visiting friends.

(bb) Inserting the total number of people interviewed who were aged between 36 – 50.

Table 3

Results of Question 3:
What is the main reason for your visit to this area today?

	Age group					
Main reason for visit	**Under 20**	**20-35**	**36-50**	**51-65**	**Over 65**	**Total**
Walking less than 5 km	4	4	5	5	3	21
Walking more than 5 km	1	5	6	2		14
Climbing		3	4			7
Having a picnic	2		2			4
Sightseeing			2	5	4	11
Bird watching				2		2
Cycling/mountain biking	5	2	2			9
Horse riding	3	2				5
Driving			2	2	2	6
Running/jogging	2	1	1			4
Shopping			3	1	3	7
Visiting historic monument/ building	2			3	2	7
Other: includes visiting friends						3
Total	19	19		20	15	100

[2]

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(iv) The students used the information in Table 3 to work out a conclusion about Hypothesis 1: *People of different ages have different reasons for visiting the area*.

Do you think the hypothesis is proven? Support your conclusion with evidence from Table 3.

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..... [4]

To investigate Hypothesis 2: *Local residents believe that tourism has a negative impact on the area*, the students interviewed 50 residents to get their opinions about tourism. The questions which they asked in the interview are shown in Fig. 7.

Questions asked in interview with local resident

Hello, I'm a student from a local school. Can I do a brief interview with you to help me complete my Geography fieldwork?

1 Do you live in the village?

☐ Yes ☐ No

(If the answer is no, thank the person and finish the interview)

2 I have listed some of the possible problems of tourism in the local area.

How much of a problem do you think these are? (Tick the relevant box)

	Very severe problem	**Quite severe problem**	**Slight problem**	**Not a problem**
Litter				
Noise				
Anti-social behaviour/ Impoliteness				
Traffic				
Parking				

Can you think of any other problems?

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Fig. 7

(c) (i) Suggest why the students asked, *Do you live in the village*? at the beginning of the interview.

..... [1]

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(ii) The results of Fig. 7, Question 2 in the interview are shown in Table 4, below.

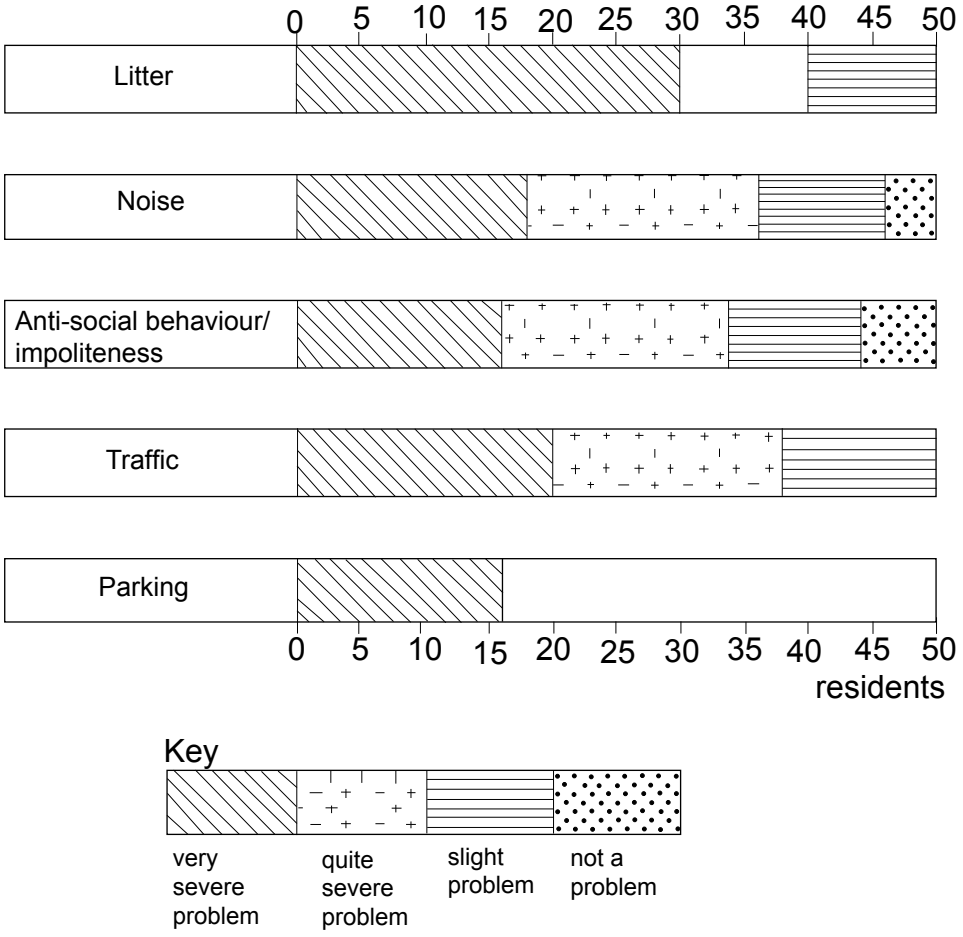
Table 4

Results of Question 2:
How much of a problem do you think these are?

	Very severe problem	Quite severe problem	Slight problem	Not a problem
Litter	30	10	10	0
Noise	18	18	10	4
Anti-social behaviour/ Impoliteness	16	18	10	6
Traffic	20	18	12	0
Parking	16	16	10	8

Using the results from Table 4 complete Fig. 8 to show what local people think about the problem of parking.

The opinion of 50 local residents



[3]

Fig. 8

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(iii) One other problem suggested by a local resident was that 75% of the tourists come between April and September.

Suggest **one** reason why the resident considers this to be a problem.

..... [1]

(iv) The results of Question 3 are shown in Table 5 below.

Table 5

Results of Question 3: How important do you think these benefits are?

Benefit	Very important	Quite important	Slightly important	Not important
Creates jobs in the local area	10	11	19	10
Brings money into the area	11	15	18	6
Local residents can use tourist facilities	7	13	16	14

Which **one** of the benefits shown in Table 5 is thought by residents to be most important? Tick (✓) the appropriate box.

Creates jobs in the local area ☐

Brings money into the area ☐

Local residents can use tourist facilities ☐ [1]

(v) What conclusion would the students make about Hypothesis 2: *Local residents believe that tourism has a negative impact on the area*?

Refer to data in Tables 4 and 5 to explain your answer.

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(d) Suggest how the students could do some fieldwork to investigate the traffic problem in the village in the national park.

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[30]