Cambridge Assessment International Education

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CANDIDATE NAME									
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3501433153

GEOGRAPHY **0460/43**

Paper 4 Alternative to Coursework **May/June 2022**

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. Any blank pages are indicated.

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1 Students in Rome, the capital city of Italy (an MEDC), were studying tourism. Tourism is an important industry in Italy and earns much foreign income.

(a) Fig. 1.1 (Insert) is a graph which shows the number of international tourists coming to Rome from different countries during one month.

(i) How did the students obtain this data? **Tick** (✓) your choice in the table below.

	tick (✓)
interviewed residents	
used a questionnaire with tourists	
did research on the internet	
asked hotel managers	

[1]

(ii) How many tourists came from Japan?

..... [1]

(iii) From which continent did most tourists come? Circle your choice below.

Australasia Europe North America South America [1]

The students decided to investigate why international tourists came to Rome and whether they thought that Rome was a 'tourist-friendly' city.

The students described a 'tourist-friendly' city as one that:

- has efficient and cheap public transport
- has residents that speak many languages
- has a clean environment
- has well-maintained attractions
- provides accessibility for people with disabilities
- is easy to move around with areas free from vehicles
- has a low level of crime
- has a low risk of terrorism.

Their two hypotheses were:

Hypothesis 1: *Most tourists come to Rome to visit historical buildings and areas*.

Hypothesis 2: *Tourists think that Rome is a 'tourist-friendly' city*.

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(b) To investigate their hypotheses the students produced a questionnaire to ask 100 tourists. This is shown in Fig. 1.2 (Insert).

(i) Their teacher suggested that before using the questionnaire the students should ask:

'Are you a tourist or do you live in Rome?'

Why do you think the teacher made this suggestion?

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.....

.....

..... [2]

(ii) The students used a sampling method of asking every tenth person they met to complete the questionnaire. What is this method of sampling called?

..... [1]

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

1 .....

.....

2 .....

..... [2]

(c) The students compared their answers to question 1 in the questionnaire (*Which country do you come from?*) with the figures shown in Fig. 1.1 which they converted to percentages. These are shown in Table 1.1 (Insert).

(i) Compare the two sets of data shown in Table 1.1. Refer to similarities and differences.

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..... [3]

(ii) The answers to question 2 in the questionnaire (*Which attractions have you come to visit in Rome?*) are shown in Table 1.2 (Insert).
Use this data to **complete the graph** in Fig. 1.3, to show the number of tourists who came to visit the parks and gardens, and musical and cultural performances. [2]

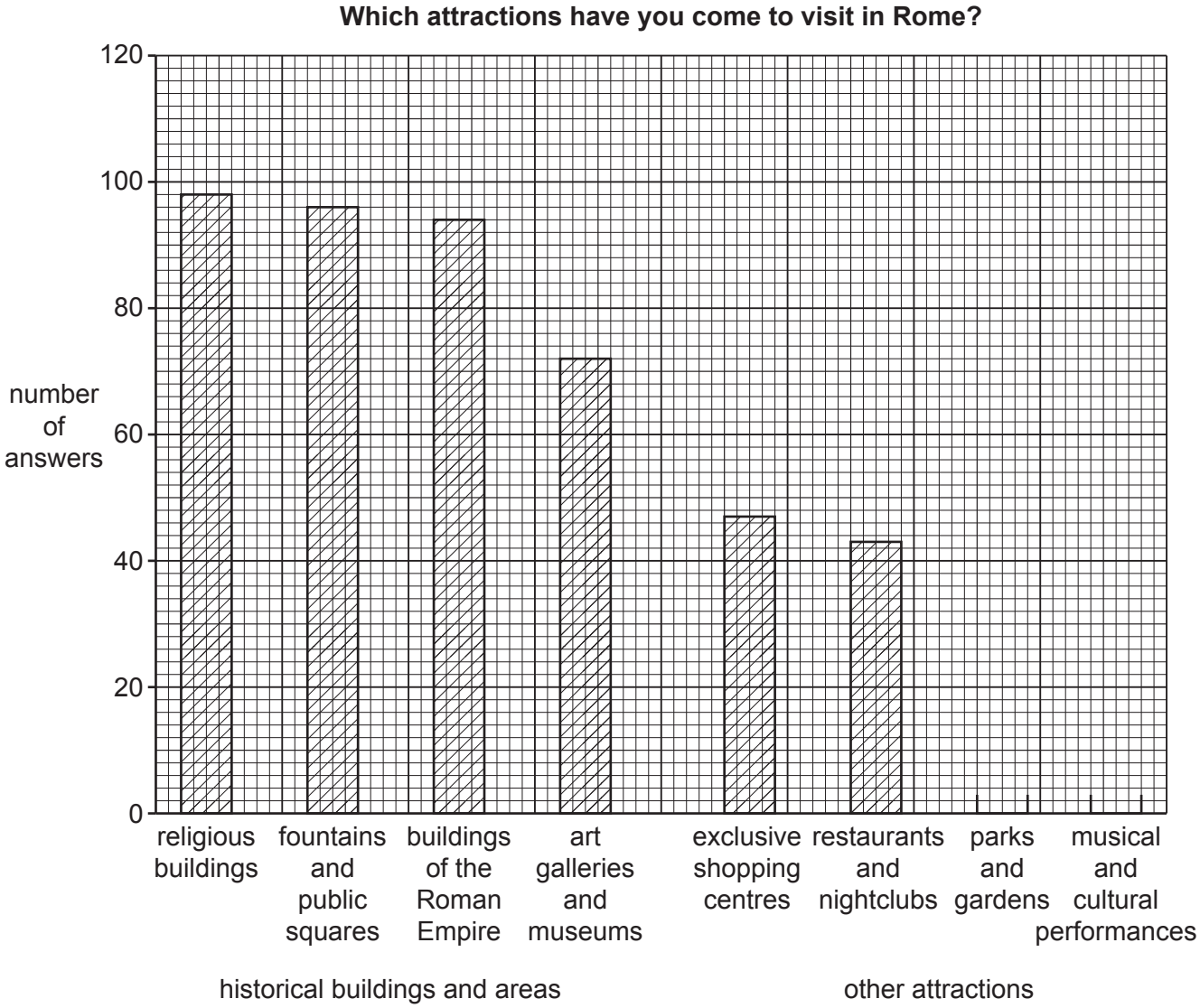

Fig. 1.3

(iii) What conclusion would the students make to **Hypothesis 1:** *Most tourists come to Rome to visit historical buildings and areas*? Support your decision with evidence from Fig. 1.3 and Table 1.2.

.....

.....

.....

..... [2]

(d) The students used the results of question 3 in the questionnaire to investigate **Hypothesis 2:** *Tourists think that Rome is a 'tourist-friendly' city*. Their results are shown in Table 1.3 (Insert).

(i) The students used the results in Table 1.3 to draw the graph in Fig. 1.4. **Plot the results** for 'There is a low risk of terrorism' on Fig. 1.4. [2]

Results of question 3 in the questionnaire
(Do you think Rome is a tourist-friendly city?)

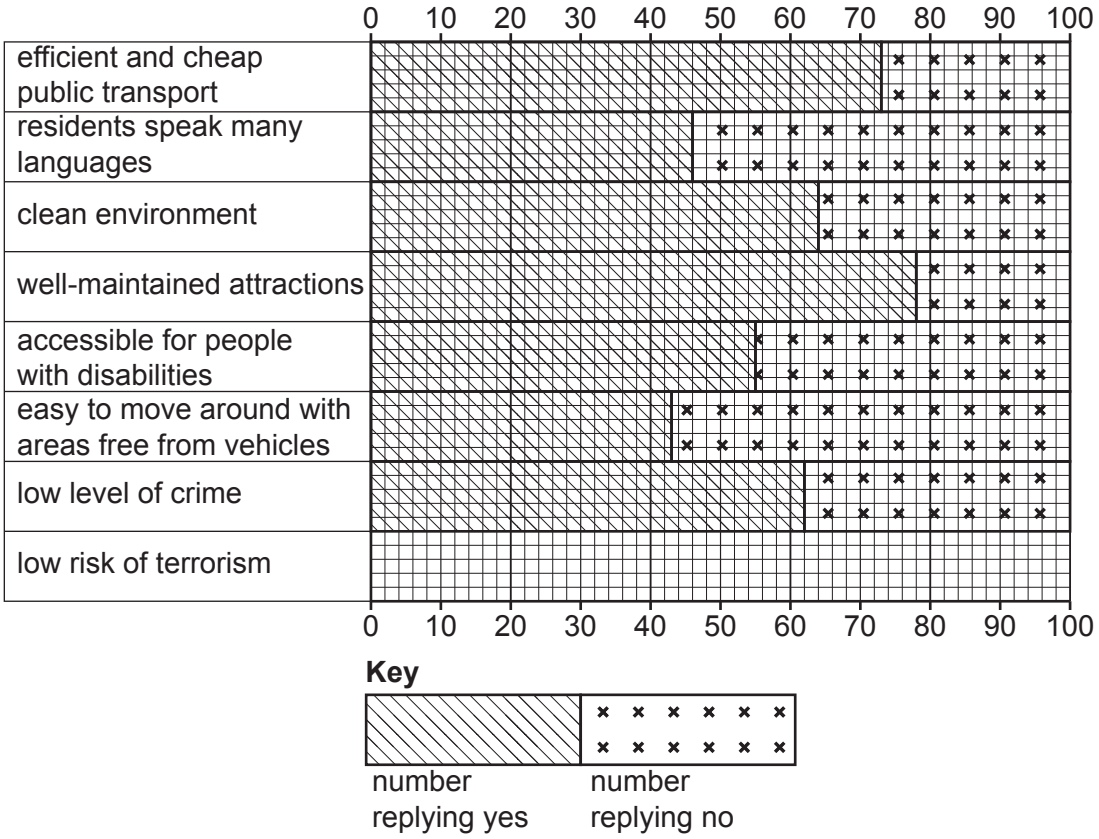

Fig. 1.4

(ii) To what extent would the students agree with **Hypothesis 2:** *Tourists think that Rome is a 'tourist-friendly' city*? Tick (✓) your decision below and support it with evidence from Fig. 1.4 and Table 1.3.

decision	**tick** (✓)
completely agree	
partially agree	
completely disagree	

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..... [4]

(e) To extend their fieldwork some students wanted to find out **residents**' opinions about tourism in Rome. They decided to interview some **residents**.

(i) Suggest **three** pieces of advice the teacher would give the students about how to carry out an interview at the homes of residents.

1 .....

.....

2 .....

.....

3 .....

..... [3]

(ii) Suggest **two** questions which the students could include in the interview to find out residents' opinions about the benefits of tourism in Rome.

1 .....

.....

2 .....

..... [2]

(f) Describe the problems caused by tourism in a tourist city.

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..... [4]

[Total: 30]

2 Students at schools in Madrid in Spain and Naples in Italy planned a weather investigation using internet links.

(a) (i) The students in Madrid used a Stevenson Screen such as the one shown in Fig. 2.1 (Insert).
In the table below describe **three** features of a Stevenson Screen and explain why each feature is important.

feature	description	why it is important
1	....	....
2	....	....
3	....	....

[6]

(ii) The students measured four weather features. **Match the weather features with the correct measuring instruments** in Table 2.1. One is done for you.

Table 2.1

weather feature	measuring instrument
atmospheric pressure	maximum–minimum thermometer
rainfall	anemometer
temperature	rain gauge
wind speed	barometer

[2]

(iii) Two measuring instruments shown in Table 2.1 would be used inside a Stevenson Screen and two would be used outside a Stevenson Screen.
Put each measuring instrument under the correct heading below.

used *inside* a Stevenson Screen	used *outside* a Stevenson Screen

[2]

(b) Study Figs. 2.2 and 2.3 (Insert) which show two measuring instruments.

(i) Explain how the rain gauge in Fig. 2.2 is used to measure rainfall.

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..... [3]

(ii) Explain how the instrument shown in Fig. 2.3 is used to measure temperature.

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..... [3]

The students in Madrid and Naples collected data about different features of weather during November. Each student decided on two hypotheses to test. One student chose the following hypotheses:

Hypothesis 1: *The daily variation in temperature is greater in Madrid than in Naples.*

The daily variation in temperature is the difference between the highest temperature and the lowest temperature in a day.

Hypothesis 2: *In Naples daily rainfall is higher when atmospheric pressure is below 1010 mb.*

(c) The students' measurements of the highest and lowest daily temperatures are shown in Table 2.2 (Insert).

(i) Use these results to **complete the lowest daily temperature line** for Madrid on 18th November in Fig. 2.4. [1]

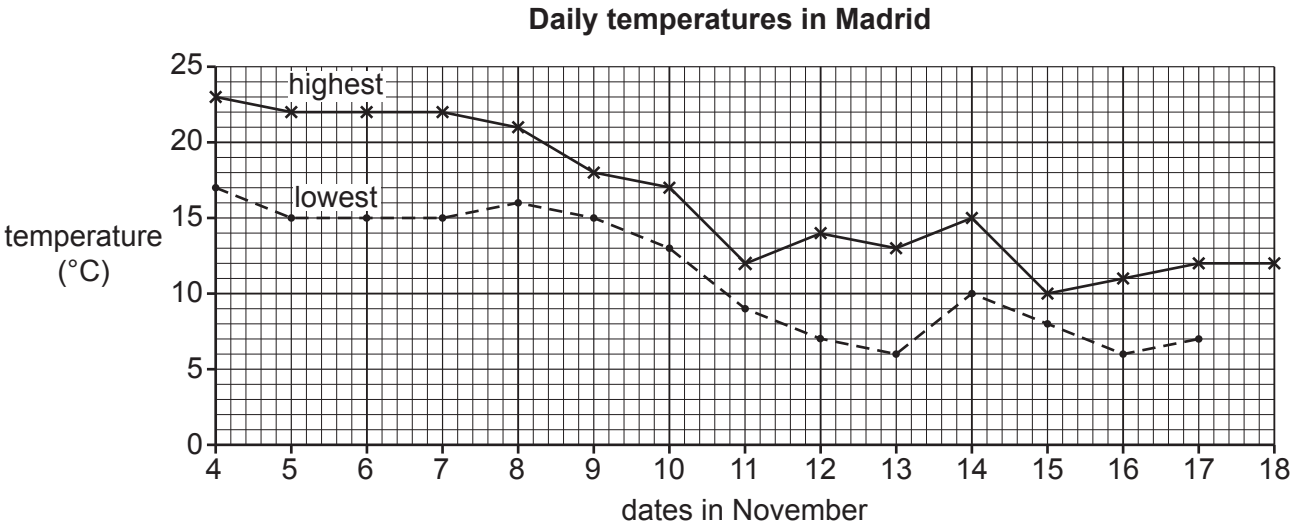

Fig. 2.4

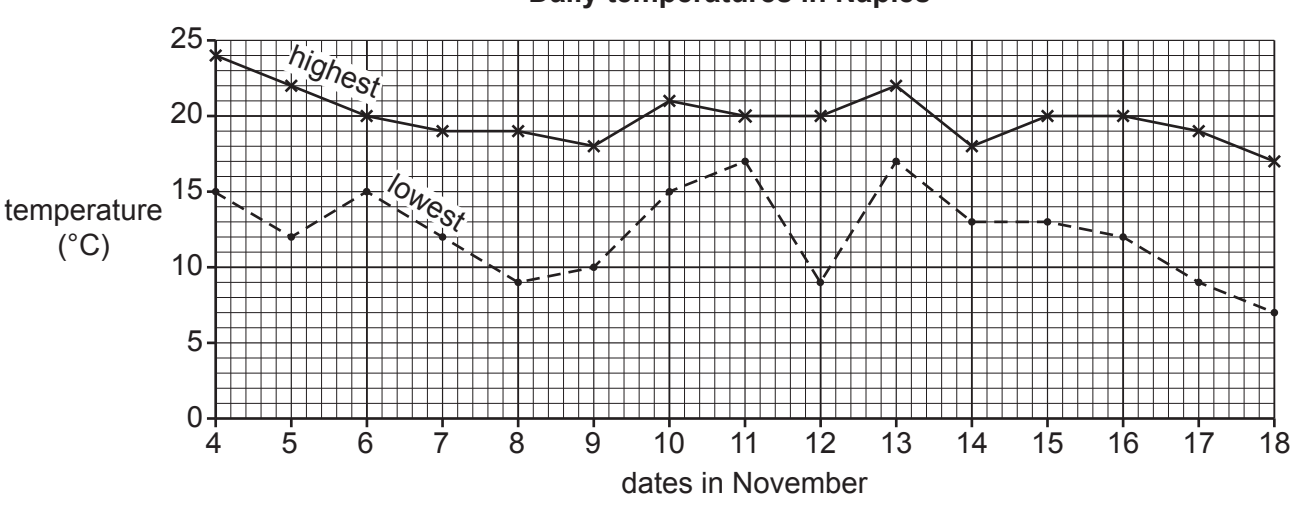

Fig. 2.5

(ii) Calculate the largest daily variation in temperature in Naples (shown in Fig. 2.5).

..... °C [1]

(iii) On what date is the smallest daily variation in temperature in Naples (shown in Fig. 2.5)?

..... November [1]

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(iv) What conclusion did the student make about **Hypothesis 1:** *The daily variation in temperature is greater in Madrid than in Naples*? Tick (✓) your decision below and support it with evidence from Figs. 2.4 and 2.5 and Table 2.2 (Insert).

decision	**tick** (✓)
true for all days	
true for most days	
false for most days	
false for all days	

.....

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..... [3]

(d) The results of the student's measurements used to test **Hypothesis 2:** *In Naples daily rainfall is higher when atmospheric pressure is below 1010 mb*, are shown in Figs. 2.6 and 2.7.

(i) Use the information below to **complete Fig. 2.6 and Fig. 2.7**. [2]

date	**18th November**
rainfall	17 mm
atmospheric pressure	1008 mb

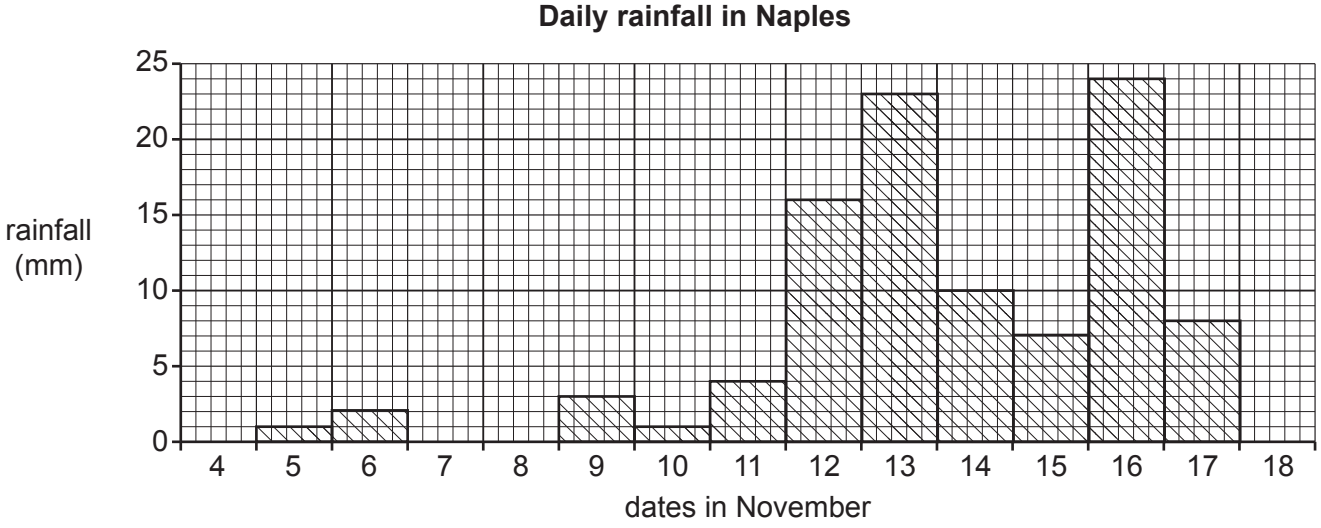

Fig. 2.6

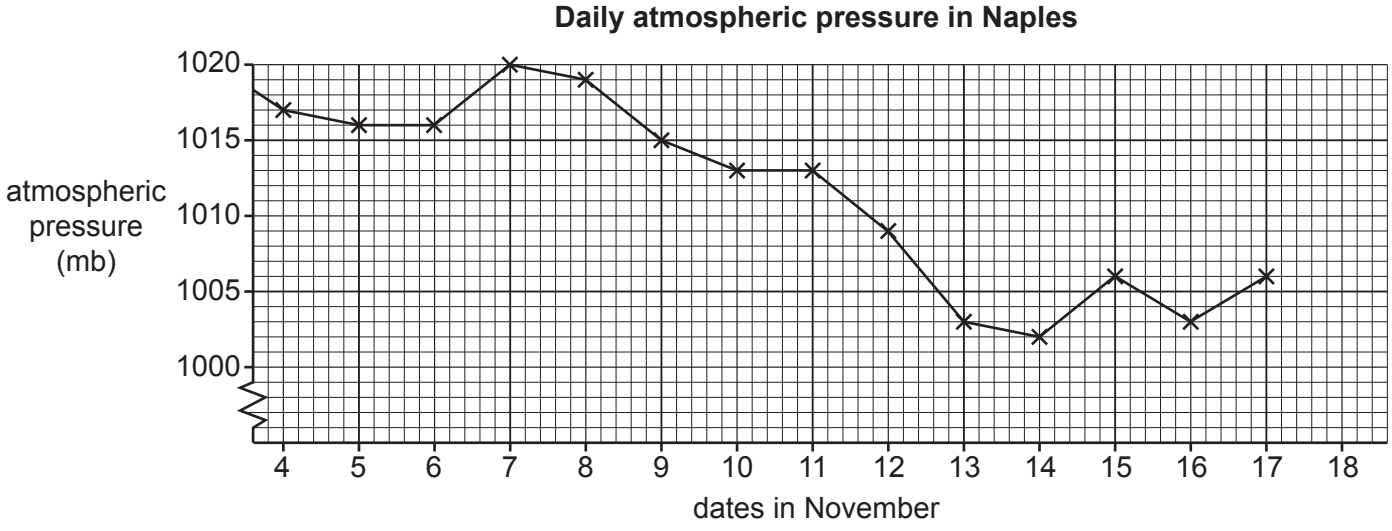

Fig. 2.7

(ii) What is the correct conclusion to **Hypothesis 2:** *In Naples daily rainfall is higher when atmospheric pressure is below 1010 mb*? Support your decision with evidence from Fig. 2.6 and Fig. 2.7.

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..... [3]

(e) Some students measured wind speed in the two cities. Their results are shown in Fig. 2.8 (Insert).

Describe the differences in wind speed between Madrid and Naples during the days in November. Use data to support your answer.

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..... [3]

[Total: 30]

Additional page

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

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