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For Examiner's Use

Free-Standing Mathematics Qualification
 June 2008
 Foundation Level



MAKING SENSE OF DATA
Unit 3

6983/2

Thursday 15 May 2008 9.00 am to 10.00 am

<p>For this paper you must have:</p> <ul style="list-style-type: none"> • a clean copy of the Data Sheet (enclosed) • a calculator • a protractor • a ruler.

For Examiner's Use			
Question	Mark	Question	Mark
1		5	
2		6	
3		7	
4			
Total (Column 1) →			
Total (Column 2) →			
TOTAL			
Examiner's Initials			

Time allowed: 1 hour

Instructions

- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Answers written in margins or on blank pages will not be marked.
- Do all rough work in this book. Cross through any work you do not want to be marked.
- You may **not** refer to the copy of the Data Sheet that was available prior to this examination. A clean copy is enclosed for your use.

Information

- The maximum mark for this paper is 40.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.

Advice

- In all calculations, show clearly how you work out your answer.



SECTION A

Answer **all** questions in the spaces provided.

Use **Grams of fibre** on page 2 of the Data Sheet.

1 For the servings given, the amount of fibre, in grams, for each vegetable or pulse is:

8, 7, 3, 5, 6, 2, 5, 1.5, 9, 5, 8, 2.5

Use these data to find, in grams:

1 (a) the greatest amount of fibre;

Answer.....
(1 mark)

1 (b) the least amount of fibre;

Answer.....
(1 mark)

1 (c) the range in the amount of fibre;

.....
Answer.....
(2 marks)

1 (d) the median amount of fibre;

.....
.....
Answer.....
(2 marks)

1 (e) the mean amount of fibre;

.....
.....
.....
Answer.....
(3 marks)



1 (f) the modal amount of fibre.

.....

Answer.....

(1 mark)

10

2 The recommended daily amount of fibre which a person should eat is 15 grams.

Kevin has one serving of broccoli.

2 (a) Express the amount of fibre in the broccoli as a fraction of the recommended daily amount of fibre.
Give your fraction in its simplest form.

.....
.....

Answer.....

(2 marks)

2 (b) Express your answer to part (a) as a percentage.

.....
.....

Answer.....

(1 mark)

3

Turn over for the next question

Turn over ►



SECTION B

Answer **all** questions in the spaces provided.

Use **Birmingham in the 1800s** on page 2 of the Data Sheet.

- 3 (a) In the mid-1800s, the average person in England worked for 60 hours a week.

In 2002, the average person in England worked 41 hours.

Express the hours worked by the average person in 2002 as a percentage of that worked in the mid-1800s.

Give your answer correct to one decimal place.

.....

.....

.....

Answer.....
(3 marks)

- 3 (b) Fran and Jack spend £ 90 per week on rent. They divide this in the ratio 1: 5, with Jack paying the most.

How much rent does Jack pay per week?

.....

.....

.....

.....

Answer.....
(3 marks)

6



SECTION C

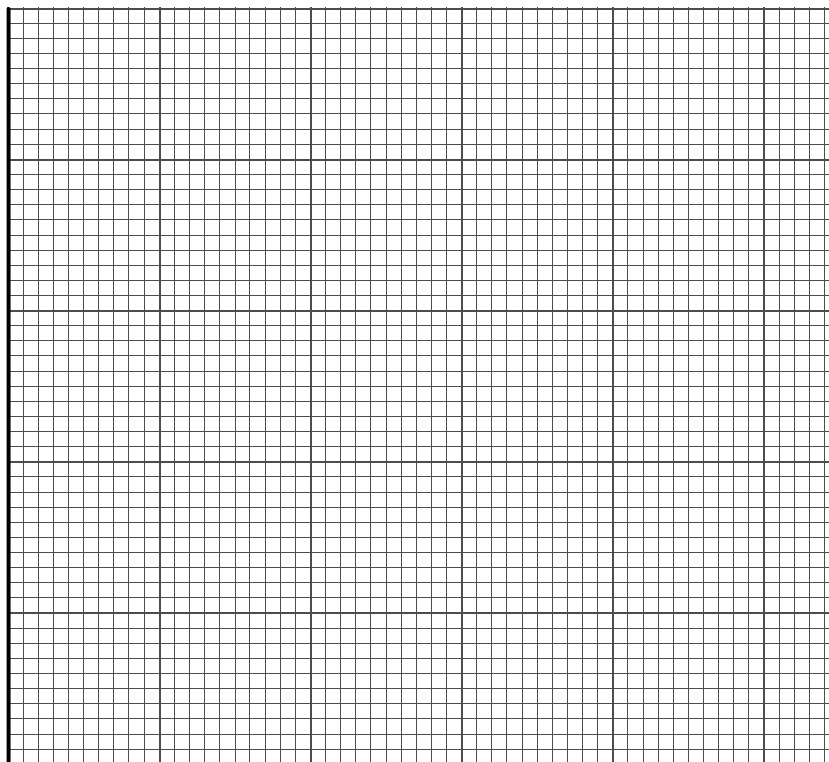
Answer **all** questions in the spaces provided.

Use **Internet sites** on page 3 of the Data Sheet.

4 The data are reproduced below.

Internet site	Number of unique UK users, January 2006 (in thousands)
Amazon	7 029
BBC	10 210
eBay	10 379
Google	16 368
Microsoft	12 725
MSN	13 705
Yahoo!	11 981

Draw a bar chart of the **five** most popular internet sites.



(4 marks)

4

Turn over ►



- 5 Alan asked thirty students in a social centre which of the seven most popular internet sites they had used in the last week. The results of his survey are shown below.

Internet site	Tally
Amazon	
BBC	
eBay	
Google	
Microsoft	
MSN	
Yahoo!	
Not used any of the internet sites listed	

- 5 (a) How can you tell that some of the students had used more than one site?

.....

.....

(1 mark)

- 5 (b) Another three students entered the social centre and their answers were:

MSN; Yahoo and MSN; eBay.

Add these data to the tally chart above.

(2 marks)




5 (c) In a group of 80 people in a club:

45 stated that they had broadband access to the internet;

20 stated that they used the internet but did not have broadband access;

15 did not use the internet.

Represent these data by means of a pictogram.

Use the symbol  to represent 10 people.

(4 marks)

7

Turn over ►

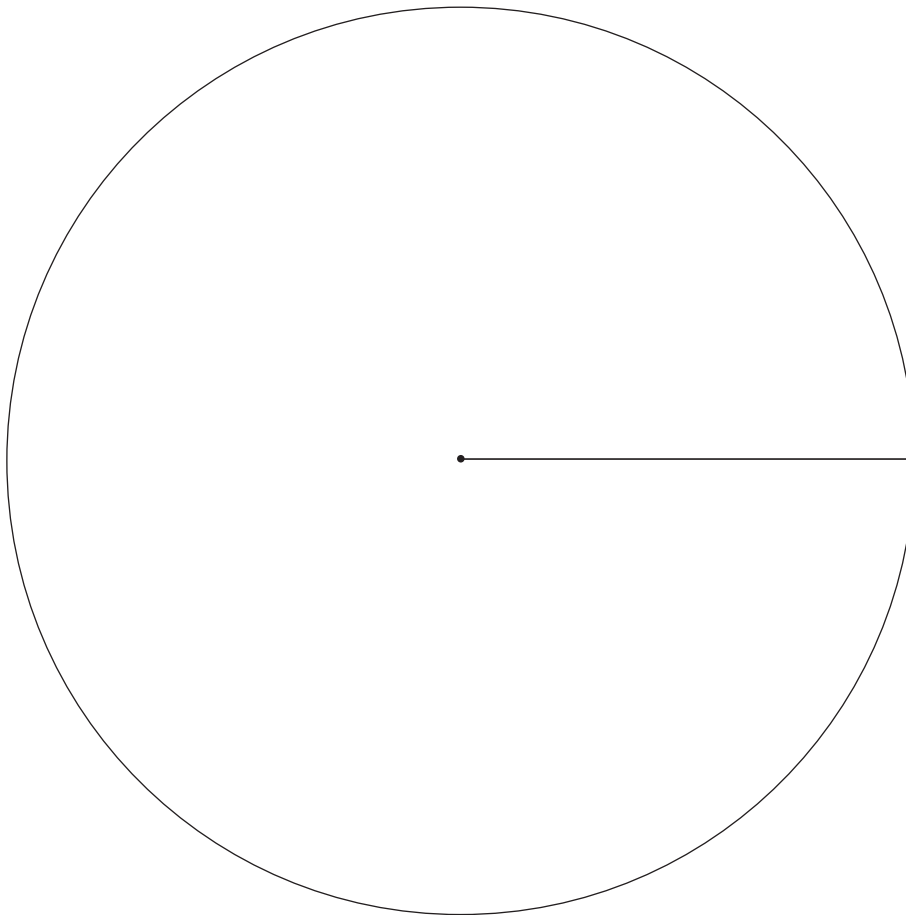


SECTION D

Answer **all** questions in the spaces provided.

Use **Energy sources** on page 3 of the Data Sheet.

- 6 Complete the pie chart below to illustrate the percentage of the energy supplied from each different source.



(5 marks)

Space for working

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5

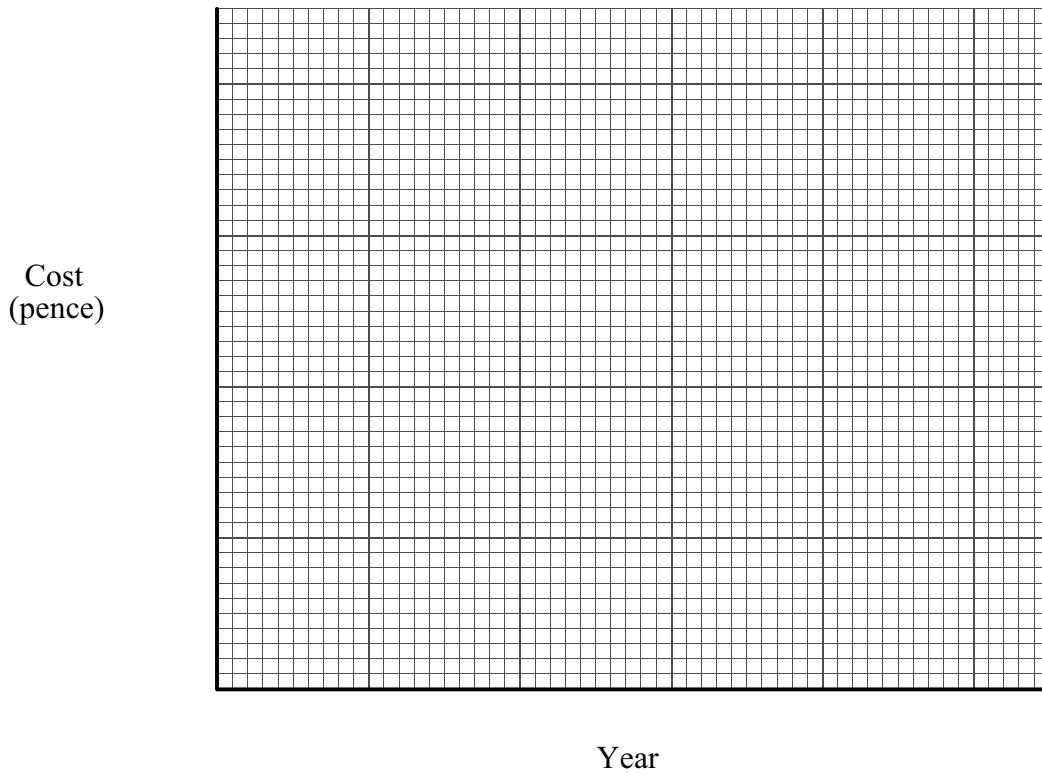


SECTION E

Answer **all** questions in the spaces provided.

Use **Telephone costs** on page 4 of the Data Sheet.

- 7 (a) Draw a graph to show the cost (in pence) of a 20 minute telephone call from Glasgow to London from 1985 to 2005.



(3 marks)

- 7 (b) Is it possible that the downward trend shown in the above graph will continue? Give a reason for your answer.

Answer.....

Reason

.....

.....

(2 marks)

END OF QUESTIONS

5



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