

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
TOTAL	



Free-Standing Mathematics Qualification
Foundation Level
June 2014

Using Data

4983

Unit 3

Monday 12 May 2014 1.30 pm to 2.30 pm

<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.

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. Do not write outside the box around each page.
- Do all rough work in this book. Cross through any work that 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 marks for questions are shown in brackets.
- The maximum mark for this paper is 40.
- You are expected to use a calculator where appropriate.

Advice

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



J U N 1 4 4 9 8 3 0 1

Section AAnswer **all** questions.

Answer each question in the space provided for that question.

Use Doughnuts on page 2 of the Data Sheet.

- 1** The energy contents of the doughnuts were as follows.

Doughnut	Energy content (calories)
Apple cinnamon	269
Chocolate custard	307
Chocolate sprinkles	413
Glazed cruller	254
Glazed raspberry	307
Lemon meringue pie	289
Original glazed	217
The glossy one (strawberry)	253

Use these data to find:

- 1 (a)** which doughnut has the most energy content;

[1 mark]

.....

Answer.....

- 1 (b)** which doughnut has the least energy content;

[1 mark]

.....

Answer.....



1 (c) the range of energy content;

[2 marks]

.....
.....

Answer.....

1 (d) the modal energy content;

[1 mark]

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.....

Answer.....

1 (e) the median energy content;

[3 marks]

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Answer.....

1 (f) the mean energy content.

[3 marks]

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Answer.....

11

Turn over for the next question

Turn over ►



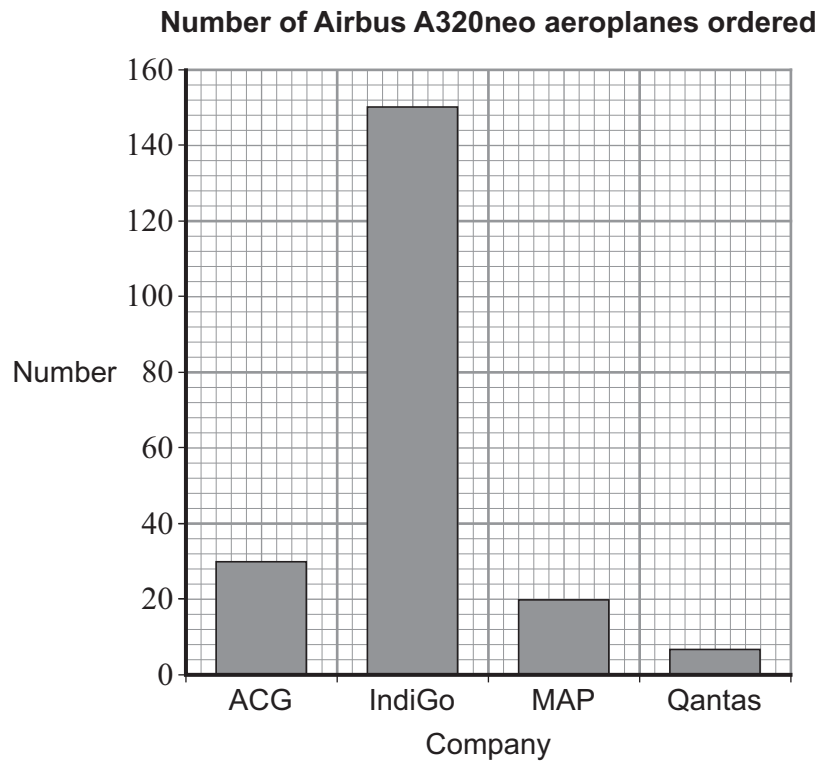
Section B

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Airbus** on page 2 of the Data Sheet.

2 The bar chart below was made to show the Airbus data from the Data Sheet.



The bar chart has **two** errors.
Describe them.

[2 marks]

Error 1

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Error 2

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2



Turn over for the next question

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

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Section C

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Cards** on page 3 of the Data Sheet.

3 Daisy sold some cards at a craft show. She used a tally chart to record how many cards of each type she sold.

She sold 10 flower cards and 14 snowman cards.

Complete **all** columns in the table below.

[4 marks]

Type of card	Tally	Number sold
3-D		
Boy birthday		
Car		13
Flower		
Girl birthday		
Snowman		

Space for working

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4



4 A spreadsheet is used to calculate the profit made when the cards are sold at a craft show.

	A	B	C	D
1	Type of card	Cost to make (£)	Selling Price (£)	Profit per card (£)
2	3-D	0.95	1.50	0.55
3	Boy birthday	0.88	1.50	0.62
4	Car	1.06	1.75	0.69
5	Flower	1.65	1.99	
6	Girl birthday	0.77	1.20	0.43
7	Snowman	0.69	1.20	

To work out the profit per card, Daisy subtracts the 'Cost to make' from the 'Selling price'.

4 (a) Calculate the profit per Snowman card.

[2 marks]

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Answer.....

4 (b) Write down a spreadsheet formula that Daisy could use to calculate the profit on a Flower card.

[1 mark]

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Answer.....

3

Turn over for the next question

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Section D

Answer **all** questions.

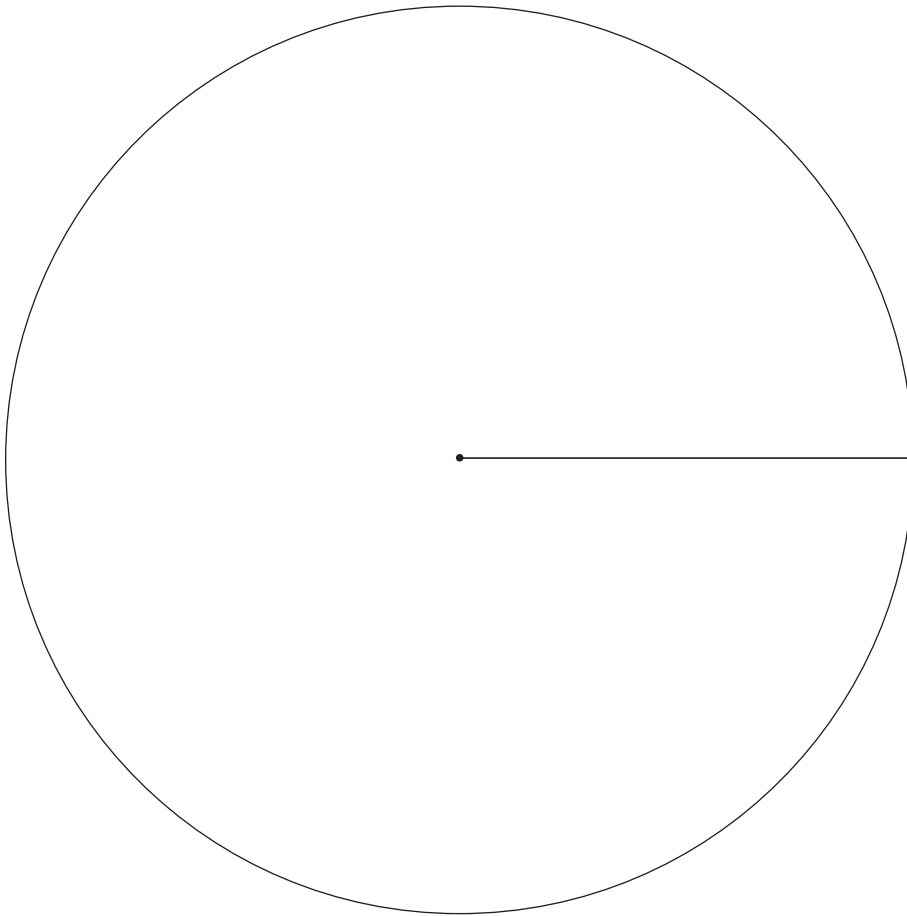
Answer each question in the space provided for that question.

Use **Garage** on page 3 of the Data Sheet.

5

Complete the pie chart below to show the telephone call data as given on the Data Sheet.

[5 marks]



Space for working

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5



6 (a) Use the data given on the Data Sheet to estimate the probability that the next call will be about an MOT.

Give your answer as a fraction in its lowest terms.

[2 marks]

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Answer.....

6 (b) What is the probability that the next call will **not** be about an MOT?

[2 marks]

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Answer.....

4

Turn over for the next question

Turn over ►



7 Ed and Ollie share a car. The car is taken to the garage to have some work done. Ed uses the car more than Ollie so they agree to split the bill in the ratio 5:3, with Ed paying more.

The cost of each item includes VAT and labour.

Use this bill from the garage to work out how much Ollie will pay in total.

[5 marks]

Work done	Cost (£)
Front tyres	74.38
Oil change	44.74
Service	110.44
MOT	35.00
Air conditioning service	107.28

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Answer.....

5



Section E

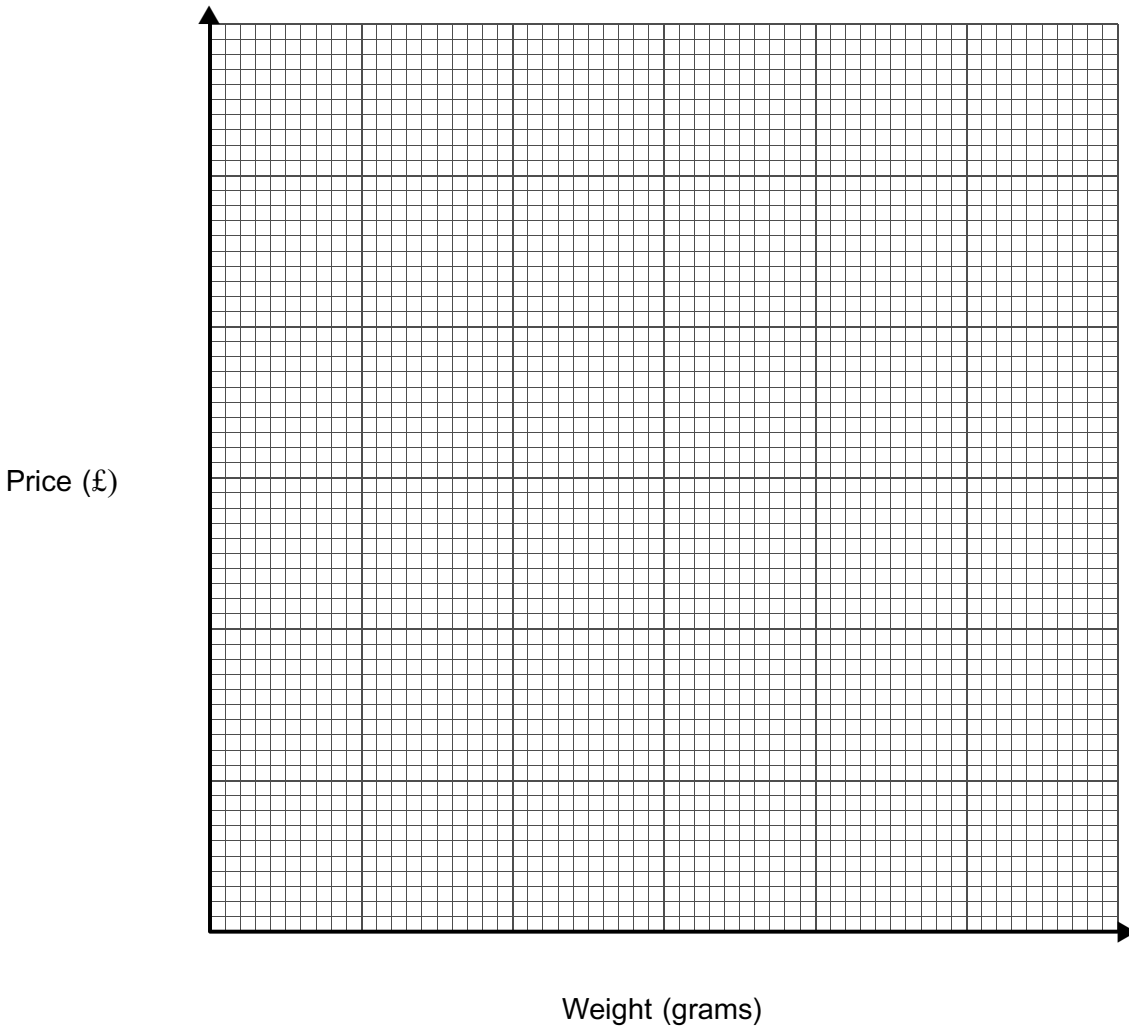
Answer **all** questions.

Answer each question in the space provided for that question.

Use **Easter eggs** on page 4 of the Data Sheet.

8 (a) On the grid below, plot the data pairs for the weights and prices of Easter eggs.

[4 marks]



8 (b) (i) Draw a line on your graph to show the trend of the data.

[1 mark]

8 (b) (ii) Use the trendline to make a conclusion about the weight of Easter eggs and the price of Easter eggs.

[1 mark]

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END OF QUESTIONS

6



There are no questions printed on this page

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