AQA

Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____

FSMQ
USING DATA
Level 1

Monday 16 May 2016 Afternoon Time allowed: 1 hour

Materials
For this paper you must have:
- a clean copy of the Data Sheet (enclosed)
- a calculator
- mathematical instruments.

Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer each question in the space provided. Do not write outside the box around each page or on blank pages.
- 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.

Do not write outside the box

Section A

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Household skills** *on page 2 of the Data Sheet*.

1 (a) What percentage of 'Over 45s' can knit?

[1 mark]

Answer _____ %

1 (b) Name **all** the skills where the percentage of 'Over 45s' who have the skill is more than double the percentage of 'Under 35s'.

[2 marks]

_____

_____

_____

_____

Answer _____

_____

1 (c) Give, as a ratio in its simplest form, the percentage of 'Under 35s' who can sew on a name tag to the percentage of 'Over 45s' who can sew on a name tag.

[2 marks]

_____

_____

Answer _____

5

Do not write outside the box

Section B

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Kindle books** *on page 3 of the Data Sheet*.

2 (a) Which **two** books in the top 10 have been in the Top 100 for the fewest days?

[1 mark]

Answer _____

_____

2 (b) By rounding each price to the nearest pound, estimate the total cost of the 10 books. You **must** show your working.

[2 marks]

_____

_____

Answer _____

2 (c) Tom wants to read the books that were the top 5 Kindle books on 5 January 2015. He has a £10 voucher. Is this enough to buy one copy of each book? You **must** show your working.

[3 marks]

_____

_____

_____

Answer _____

2 (d) Work out the mean cost of the books that were the top 5 Kindle books on 5 January 2015. Give your answer to the nearest penny.

[3 marks]

_____

_____

_____

Answer _____

9

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3 (a) Lucy puts some of the information into a spreadsheet.
She has not formatted cell D4 correctly to show an amount of money.

Explain how you can tell.

[1 mark]

	A	B	C	D
1	**Author**	**Title**	**Number of days in Top 100**	**Cost (£)**
2	Nadine Dorries	Hide Her Name	29	0.99
3	Rachel Abbott	Sleep Tight	193	0.99
4	Adele Parks	The State We're In	65	3
5	Mark Billingham	Sleepyhead	20	3.95
6	David Mitchell	Thinking About It Only Makes It Worse	12	0.99
7	Michael Connelly	The Black Echo	12	4.31
8	Gillian Flynn	Gone Girl	744	1.26
9	Karen Joy Fowler	We Are Completely Beside Ourselves	172	1.59
10	Neil Gaiman	Stardust	15	4.31
11	Stieg Larsson	The Girl With The Dragon Tattoo	878	3.99

3 (b) Which of these is a correct formula for finding the mean cost of the books in the top 10?
Tick (✓) your answer.

[1 mark]

=mean(D1:D11)	
=mean(D2:D11)	
=mean(C1:C11)	
=mean(C2:C11)	

2

Do not write outside the box

4 (a) What is the probability that a book from the top 10, chosen at random, costs **more than** £3.95?

Give your answer as a decimal.

[1 mark]

Answer _____

4 (b) What is the probability that a book from the top 10, chosen at random, costs **less than** £1.50?

Give your answer as a fraction in its simplest form.

[2 marks]

_____

_____

Answer _____

3

Turn over for the next question

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Section C

Answer **all** questions.

Answer each question in the space provided for that question.

Use **Cereal and breakfast bars** *on page 2 of the Data Sheet*.

5 (a) Work out the median total weight of the bars.

[3 marks]

Answer _____ g

5 (b) Complete the table to show the percentage of each bar that is sugar.
Give each answer correct to one decimal place.

[4 marks]

Bar	**Weight of bar (g)**	**Weight of sugar per bar (g)**	**Percentage of bar that is sugar**
Alpen Light, Apple and Sultana	19	4.7	
Cadbury Brunch, Raisin	32	13.0	
Eat Natural, Brazil and Sultana	50	19.4	
Go Ahead, Apple Bake	35	12.4	
Kellogg's Nutri-Grain, Strawberry	37	12.0	
Trek, Berry Burst	55	24.5	

Do not write outside the box

5 (c) Which bar contains the highest percentage of sugar?

[1 mark]

Answer _____

5 (d) Name **all** the bars where more than $\frac{2}{5}$ of their total weight is sugar.

[2 marks]

_____

_____

Answer _____

_____

10

Turn over for the next question

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Section D

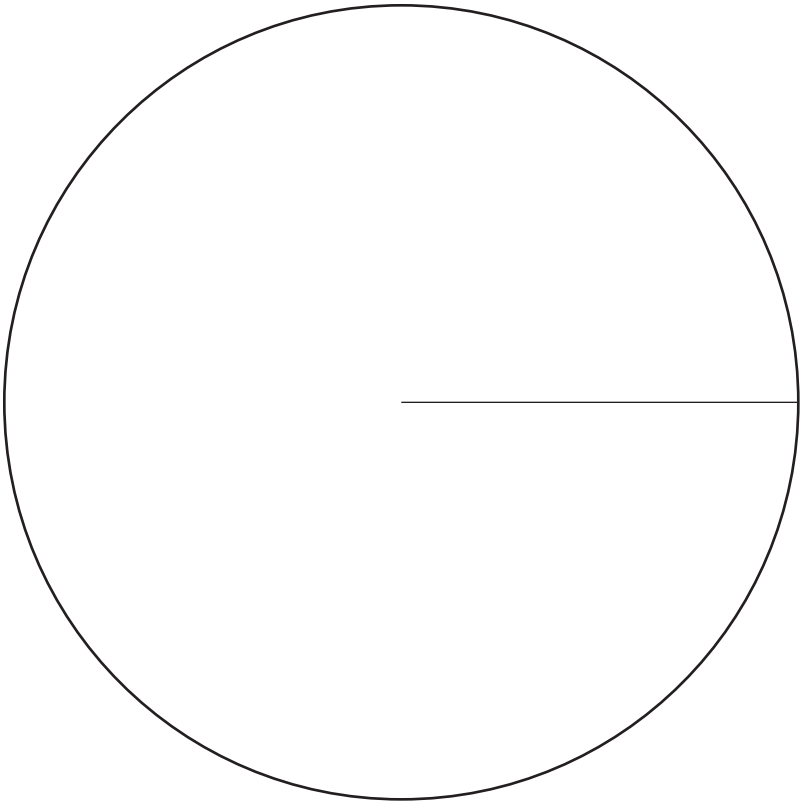
Answer **all** questions.

Answer each question in the space provided for that question.

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

6 (a) Draw a pie chart to show the number of each type of cake that Mandy made yesterday.

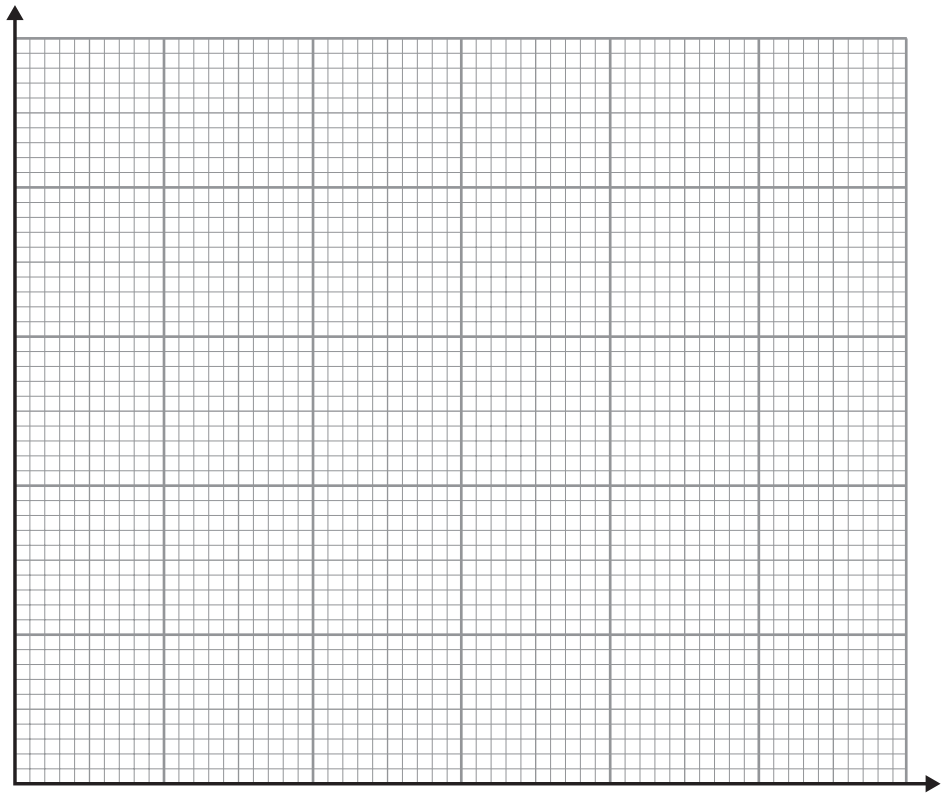
[5 marks]



6 (b) Draw a **different** chart or diagram to show the number of each type of cake that Mandy made yesterday. You may use the blank space or the graph paper on the page opposite.

[4 marks]

Do not write outside the box



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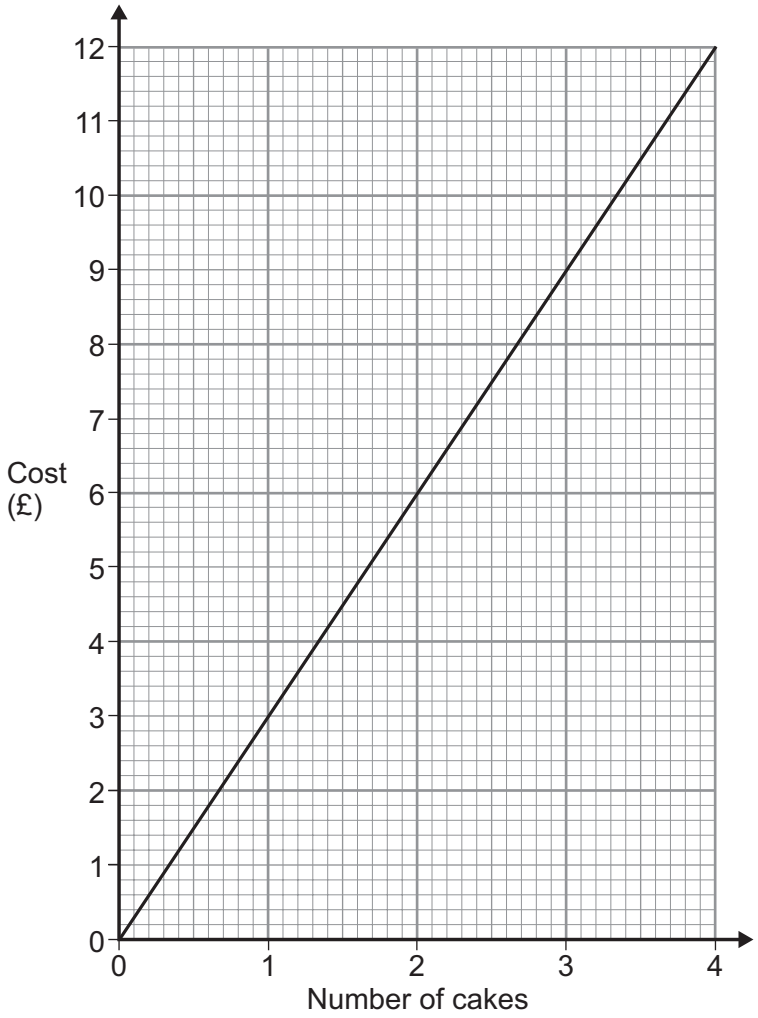
6 (c) The graph shows how much Mandy charges for her chocolate cakes.



Does the graph show direct proportion?
Tick (✓) your answer.

[1 mark]

Yes	
No	

Give a reason for your answer.

10

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7 Here is part of a bus timetable.

Blackburn	1036	1136	1236	1336	1436
Hospital	1047	1147	1247	1347	1447
Belthorn	1055	1155	1255	1355	1455
Haslingden	1107	1207	1307	1407	1507
Helmshore	1111	1211	1311	1411	1511
Rawtenstall	1120	1220	1320	1420	1520

Mandy lives in Belthorn. She is taking some of her cakes to Helmshore. She wants to arrive before 12:30

Write down the time of the latest bus she can catch from Belthorn.

You may assume that all buses depart and arrive on time.

[1 mark]

Answer _____

1

END OF QUESTIONS

There are no questions printed on this page

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ANSWER IN THE SPACES PROVIDED

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