Surname

Other Names

Candidate Signature

AQA

General Certificate of Secondary Education
Foundation Tier
November 2013

Mathematics   43601F

Unit 1

F

Wednesday 6 November 2013   9.00 am to 10.00 am

For this paper you must have:
- a calculator
- mathematical instruments.

Time allowed
- 1 hour

Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- 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 or on blank pages.
- Do all rough work in this book.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 54.
- The quality of your written communication is specifically assessed in Questions 7 and 8. These questions are indicated with an asterisk (*).
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer book.

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

43601F

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

1 Four children recorded the hours they spent watching television and playing games.

1 (a) Use the information in the table to complete the dual bar chart.

	Number of hours playing games
Eve	4
Frank	6
Gok	5
Hamza	1
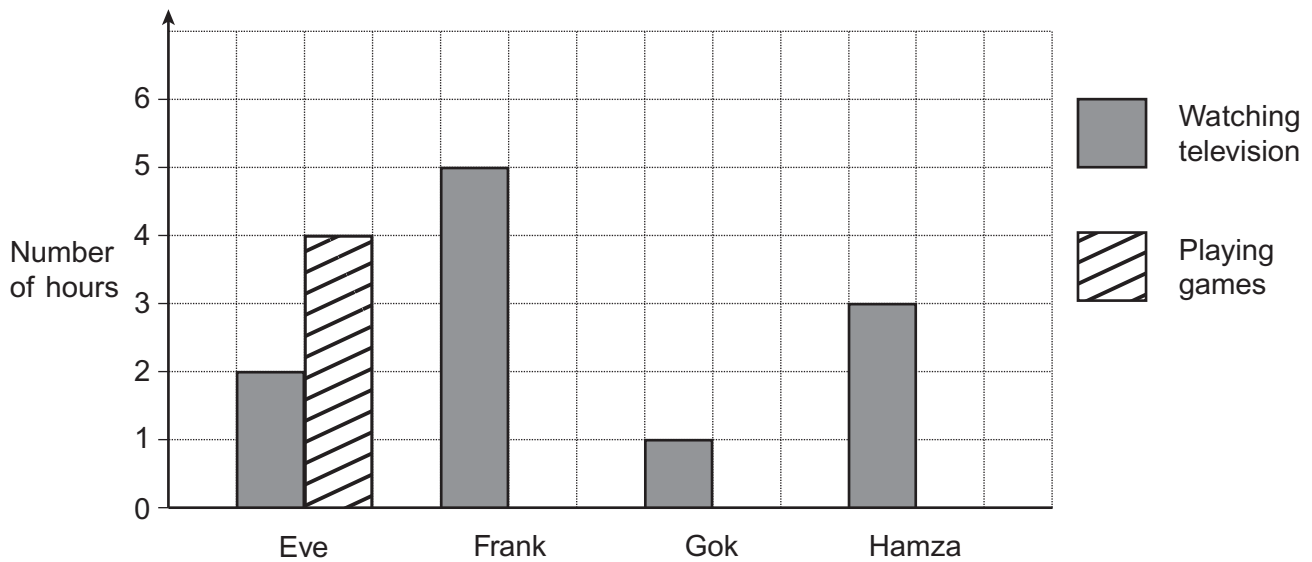
(2 marks)

1 (b) Who watched television for 5 hours?

Answer .... *(1 mark)*

1 (c) Who spent **more** time watching television than playing games?

Answer .... *(1 mark)*

2   Here are nine numbers.

23   25   23   31   20   25   21   24   25

2 (a)   Work out the median.

....

Answer ....   *(2 marks)*

2 (b)   Write down the mode.

Answer ....   *(1 mark)*

Turn over for the next question

7

3   A fair spinner has six equal sections.
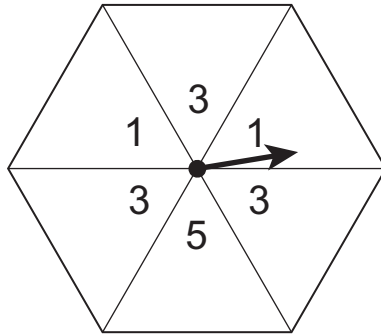
3 (a)   Circle the chance of the arrow landing on an odd number.

impossible   unlikely   evens   likely   certain

(1 mark)

3 (b)   Circle the chance of the arrow landing on 3.

impossible   unlikely   evens   likely   certain

(1 mark)

4 Here is part of a pictogram about numbers of pets.
The information about cats and dogs has been torn off.

Cats		
Dogs		
Goldfish	⊘⊘⊘⊘⊘⊘	
Hamsters	⊘⊘	4

Total = 25
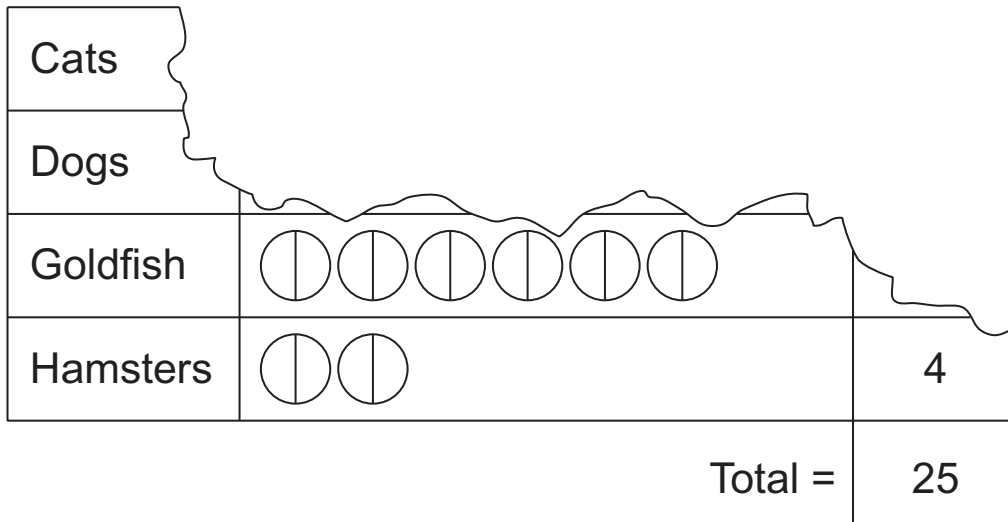
Key: ⊘ represents 2 pets

The number of cats is **half** the number of dogs.

Work out the number of cats and the number of dogs.

....

....

....

....

Cats ....

Dogs .... *(4 marks)*

6

Turn over ▶

5 Here is some information about a group of 20 children.

	Boys	Girls
Left-handed	4	1
Right-handed	7	8

5 (a) What fraction of the 20 children are right-handed?
Write your fraction in its simplest form.

....

....

....

Answer .... *(3 marks)*

5 (b) A child is chosen at random from the group.

Work out the probability that the child is a girl.

....

....

....

Answer .... *(2 marks)*

6   A lunchbox contains **one** sandwich and **one** drink from this list.

Sandwiches	**Drinks**
Cheese (C)	Blackcurrant (B)
Ham (H)	Lemonade (L)
Prawn (P)	Water (W)

6 (a)   List **all** possible combinations.

One has been done for you.

CB ....

....

....

(3 marks)

6 (b)   One combination is chosen at random.

What is the probability that it is Ham and Water?

....

Answer ....   *(1 mark)*

Turn over for the next question

Turn over ▶

7 Chris recorded the number of runs he scored in five cricket matches.

21   20   29   22   24

7 (a) Calculate the mean.
Give your answer to the nearest whole number.

....

....

....

Answer .... *(4 marks)*

7 (b) Calculate the range.

....

Answer .... *(1 mark)*

Tommy also recorded the number of runs he scored in the five matches.

*7 (c)   Tommy's mean was 30.

He says,   "I scored more runs than Chris."

Use the data to comment on this statement.

....

....

....

(1 mark)

*7 (d)   Tommy's range was 75.

Chris says,   "I was more consistent than Tommy."

Use the data to comment on this statement.

....

....

....
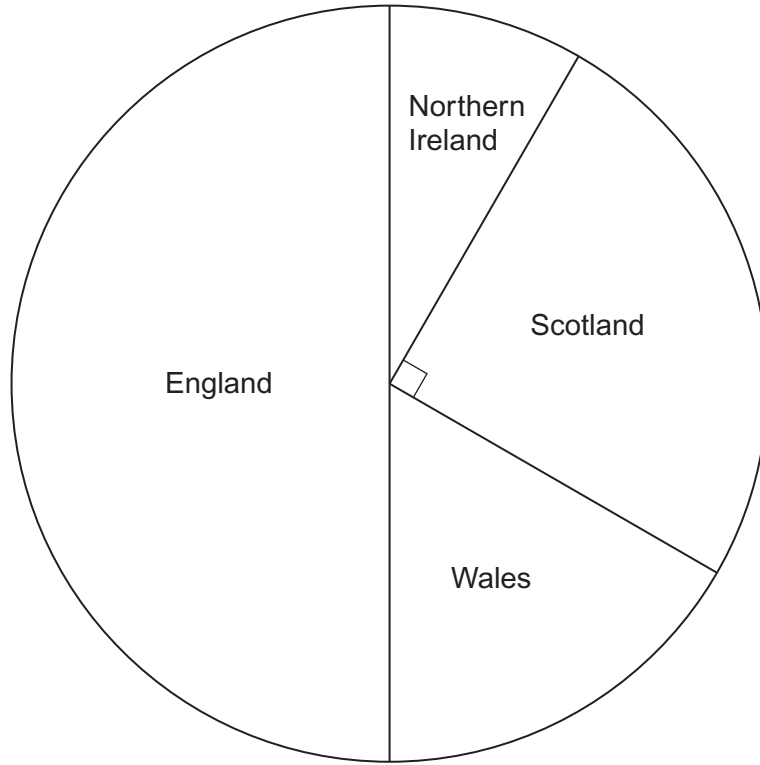
(1 mark)

Turn over for the next question

8   The pie chart shows information about the number of magazines sold in four countries.

8 (a)   What percentage of the total were sold in Scotland?

....

....

....

Answer .... %   *(2 marks)*

*8 (b)   Make **one** comparison of the sales in England with the sales in the other countries.

....

....

(1 mark)

8 (c) 30 000 magazines were sold in Wales.

How many magazines were sold in total?

....

....

....

Answer .... *(3 marks)*

9 Here is some information about 50 houses.

Number of bedrooms	Number of houses
1	6
2	10
3	22
4	9
5	3
	Total = 50

Work out the total number of bedrooms in the 50 houses.
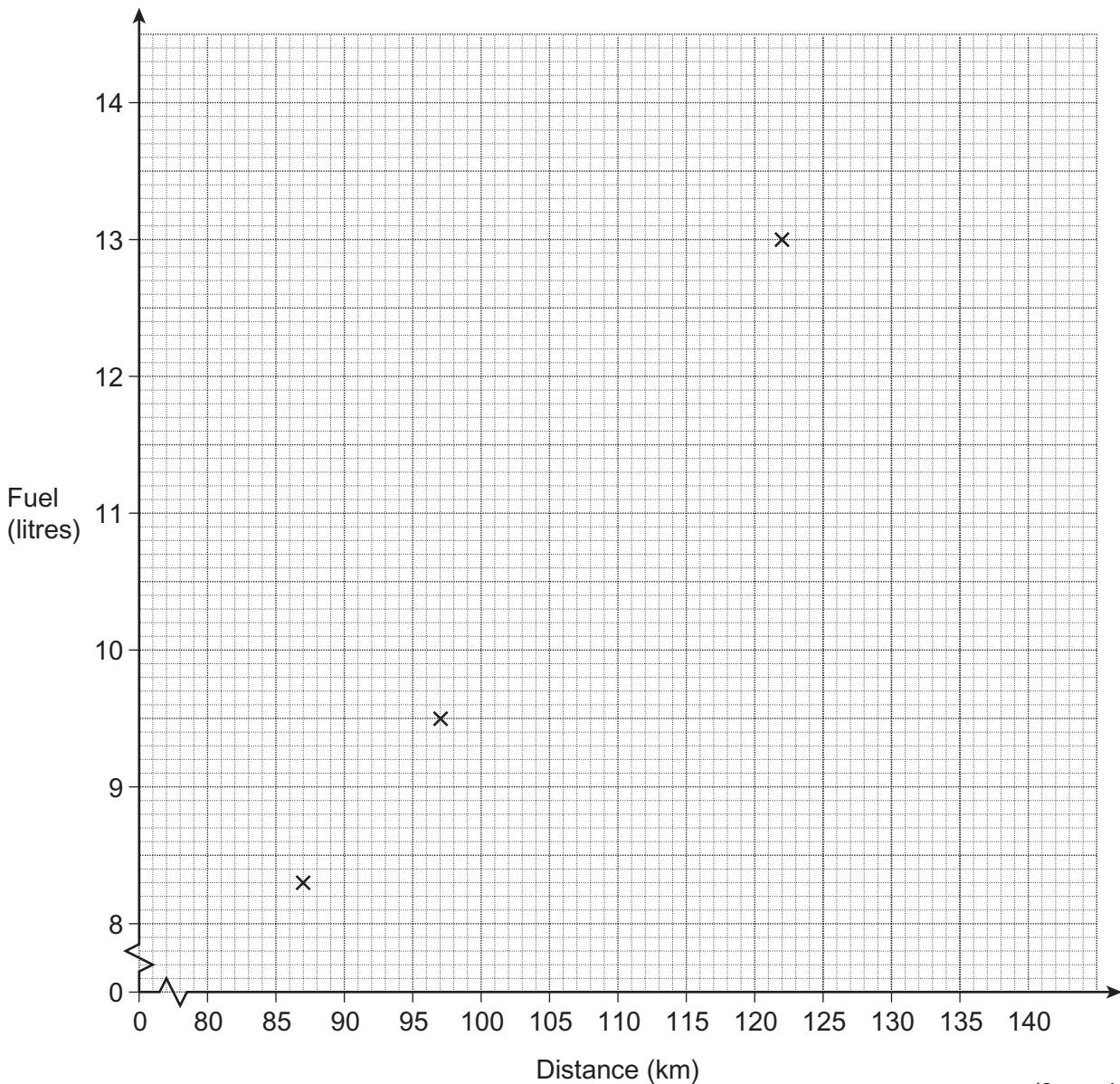
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Answer .... *(3 marks)*

9

Turn over ▶

10   Each day a taxi driver records the distance he travels.
He also records the amount of fuel his car uses.

Distance (km)	87	122	97	90	105	100	135	116
Fuel (litres)	8.3	13.0	9.5	9.4	11.2	9.9	14.0	12.0

10 (a)   Complete the scatter graph.
The first three points have already been plotted.

(2 marks)

10 (b)   Draw a line of best fit.

(1 mark)

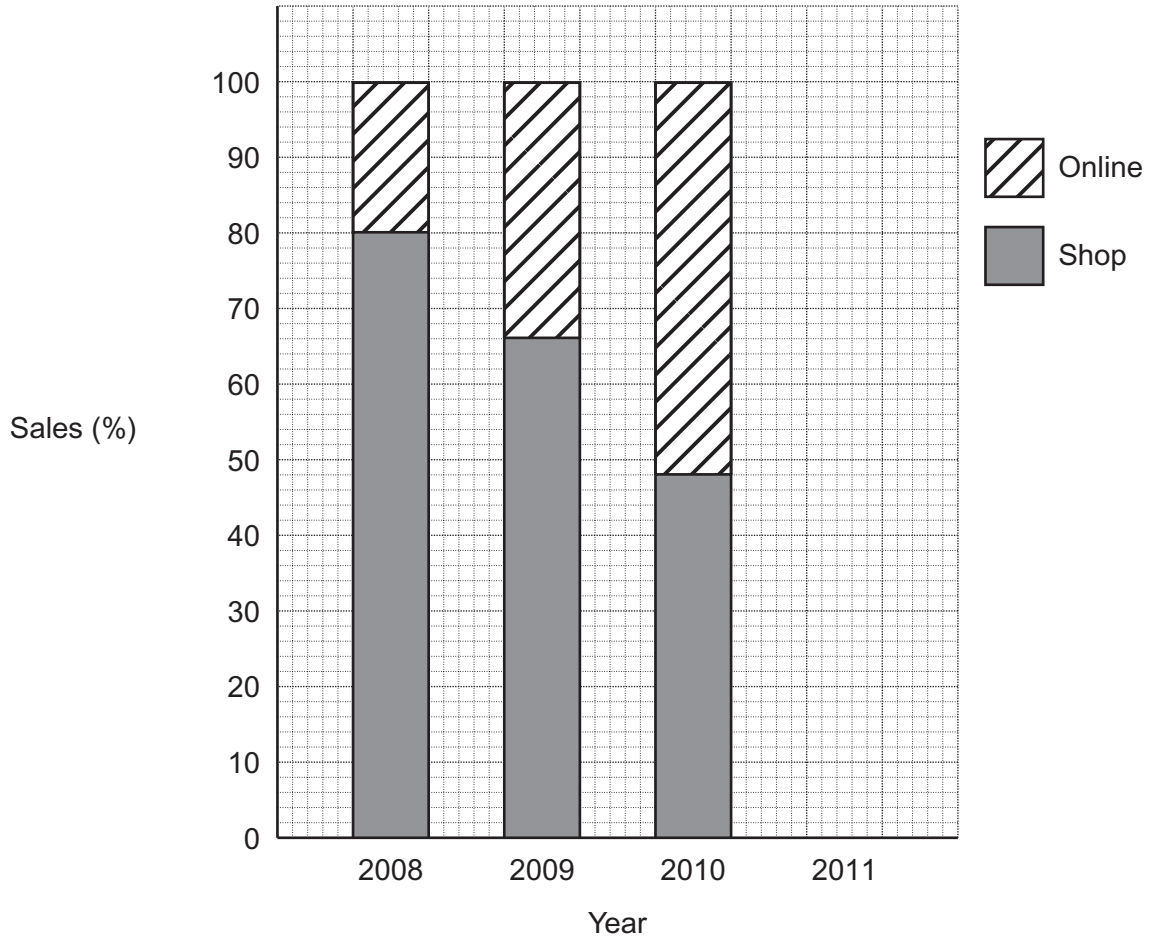**10 (c)**   Use your line of best fit to predict the fuel used to travel 110 km.

....

Answer .... litres   *(1 mark)*

Turn over for the next question

4

Turn over ▶

11 A company sells items online and in a shop.
This chart shows information about its sales.

11 (a) The table shows the sales for 2011.

	Sales (£ thousands)
Online	152
Shop	48
Total	200

Show the information for 2011 sales on the chart.

....

....
(3 marks)

11 (b) Work out the ratio of online sales to shop sales for **2008**.
Give your answer in its simplest form.

....

Answer ....…... : ....…... *(2 marks)*

Turn over for the next question

5

12 The pay of 100 students with Saturday jobs was recorded.

Pay (£x)	Number of students
$0 < x \leqslant 10$	2
$10 < x \leqslant 20$	44
$20 < x \leqslant 30$	41
$30 < x \leqslant 40$	1
$40 < x \leqslant 50$	2
$50 < x \leqslant 60$	4
$60 < x \leqslant 100$	6
	Total = 100

12 (a) How many were paid more than £30?

....

Answer .... *(1 mark)*

12 (b) How many were paid £5 or less?
Circle your answer.

0　　　　　　1　　　　　　2　　　　　　Cannot tell

(1 mark)

12 (c) Work out the class interval that contains the median.

Answer .... $< x \leqslant$ .... *(1 mark)*

13   In a survey people had to choose A, B, C or D.

The percentages for B, C and D are shown.

A	B	C	D
	25%	35%	30%

150 people chose B.

How many people chose A?

....

....

....

....

Answer ....   *(4 marks)*

END OF QUESTIONS

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