Centre Number						Candidate Number				
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Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Pages	Mark
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14 – 15	
16 – 17	
TOTAL	

AQA

General Certificate of Secondary Education
Foundation Tier
November 2014

Mathematics 43601F

Unit 1

F

Monday 10 November 2014 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 2, 3 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.

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

1 Ten cards have letters written on them.

A	M	A	Q	A
M	A	T	H	S

One card is chosen at random.

1 (a) Circle the chance of choosing Q.

[1 mark]

impossible unlikely evens likely certain

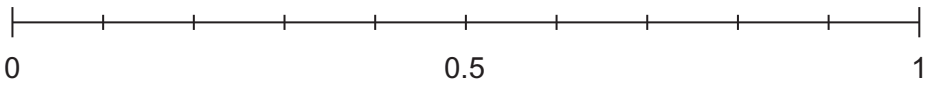
1 (b) Circle the chance of choosing B.

[1 mark]

impossible unlikely evens likely certain

1 (c) Draw a cross on the scale to show the probability of choosing A.

[1 mark]



1 (d) What is the probability of **not** choosing A?

[1 mark]

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Answer .....

2 Adam saved these amounts.

£124 £79.50 £122.50 £96 £85

2 (a) Work out the range.

[2 marks]

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Answer £ .....

***2 (b)** Matthew saved **half** as much as Adam.

Work out the **total** amount that Matthew saved.

[3 marks]

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Answer £ .....

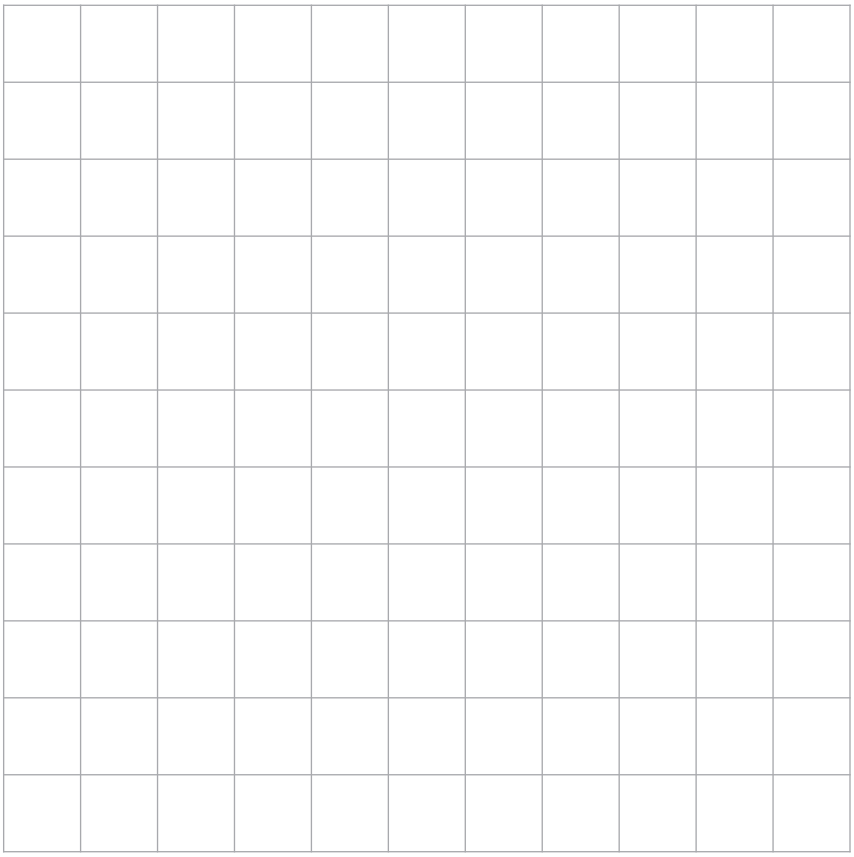
9

3 A band played 20 concerts in five continents.

Continent	Tally	Frequency
Africa	|	
Asia	|	
Europe	𝍸 𝍸	
North America	|||	
South America	𝍸	
		Total = 20

***3 (a)** Draw a fully labelled bar chart to show this information.

[4 marks]



3 (b) What fraction of the 20 concerts were in South America?
Give your answer in its simplest form.

[2 marks]

.....

Answer .....

4 80 people were asked if they own a car.
The table shows some of the information.

	Yes	**No**	**Total**
Women	18		35
Men	33	12	
Total			80

4 (a) How many men said yes?

[1 mark]

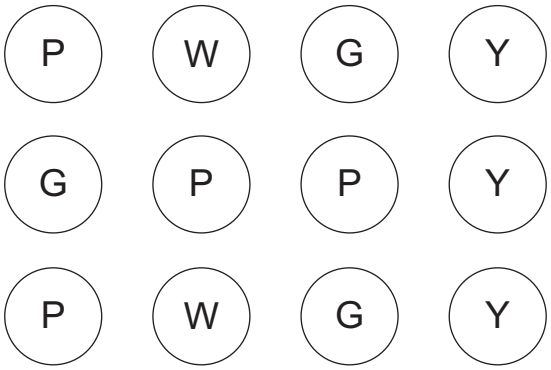
Answer .....

4 (b) Complete the table.

[3 marks]

10

5 A bag has 12 counters.
They are pink (P), white (W), green (G) or yellow (Y).



One counter is taken from the bag.
A new counter is then added to the bag.

The mode is now yellow.

5 (a) What colour counter was taken out?
Circle your answer.

[1 mark]

Pink White Green Yellow

5 (b) What colour counter was added?
Circle your answer.

[1 mark]

Pink White Green Yellow

6 A data logging machine counts people entering and leaving a museum.

Hour ending at	Entering	Leaving
8 am	30	6
9 am	21	25
10 am	75	70
11 am	40	38

6 (a) The museum opens at 7 am.

Show that there were 24 people in the museum at 8 am.

[1 mark]

.....

6 (b) How many people were in the museum at 11 am?

[2 marks]

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Answer .....

5

Turn over ▶

7 Emma worked for 12 weeks.
The stem-and-leaf diagram shows the number of sales she made each week.

Key: 2 | 0 represents 20 sales

0	7						
1	5	8	9				
2	0	2	4	6	7	9	9
3	1						

Each week she could earn a bonus of £15 or £50

Number of sales in a week	Bonus
Under 25	£0
25 – 30	£15
Over 30	£50

Calculate her total bonus for the 12 weeks.

[2 marks]

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Answer £ .....

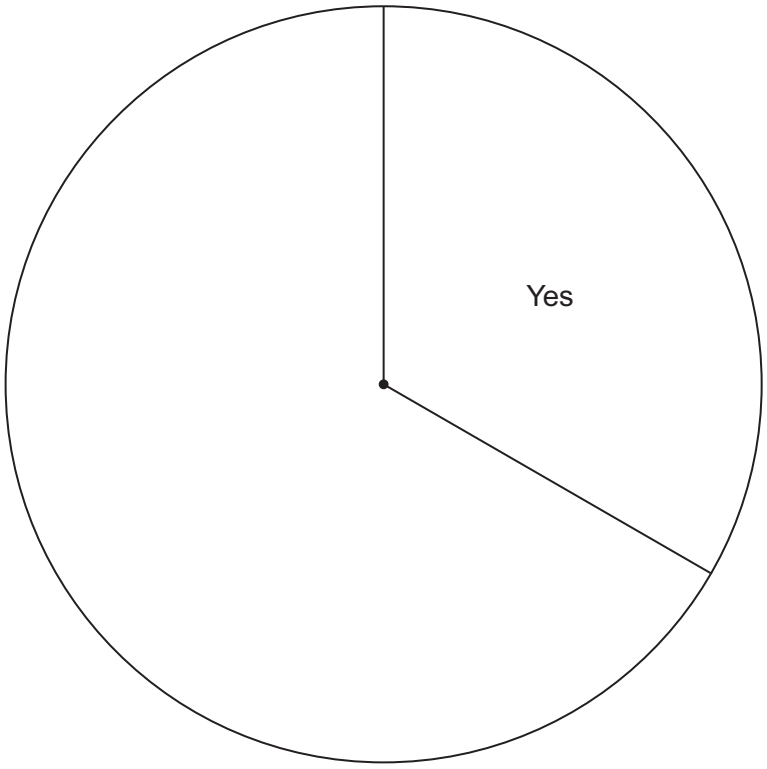
***8** A reporter asked people if they agreed with a government policy.

$\frac{1}{3}$ said Yes

$\frac{2}{5}$ said No

The rest said Don't know

Survey results



Complete the pie chart.

[3 marks]

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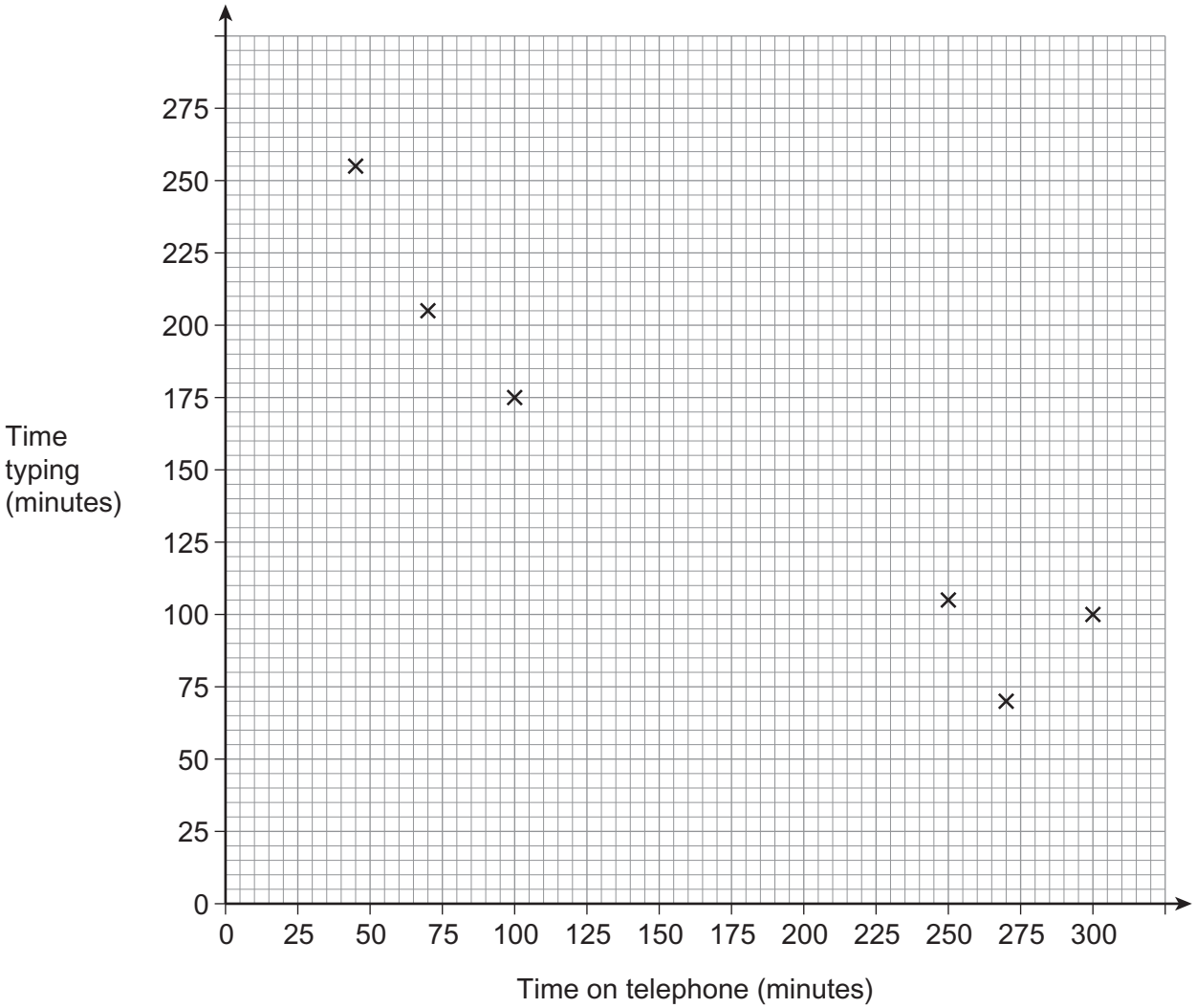
5

Turn over ▶

9 A secretary types letters and answers the telephone.
The times spent on six days are shown on the scatter graph.



9 (a) The table shows the times spent on the next four days.

Time on telephone (minutes)	275	150	125	180
Time typing (minutes)	125	190	225	175

Show these times on the scatter graph.

[2 marks]

9 (b) Draw a line of best fit.

[1 mark]

9 (c) On another day she spent 200 minutes on the telephone.

Use your line of best fit to estimate the time she spent typing that day.

[1 mark]

Answer ..... minutes

Turn over for the next question

4

10 Here is some information about tourism in 2012

Country visited	Number of tourists (millions)	Total spent by tourists ($ millions)
France	83.0	53 600
USA	67.0	126 200
Spain	57.7	55 900

10 (a) How many **more** tourists visited France than Spain?

[2 marks]

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Answer ..... million

10 (b) 21% of the total spent by tourists in the USA was by Canadians.

Work out the amount spent by Canadian tourists in the USA.

[2 marks]

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Answer $ ..... million

10 (c) In the UK the total spent by tourists was $36 600 million.
There were 29.3 million tourists.

Work out the average spent per tourist in the UK.
Give your answer to the nearest $10

[3 marks]

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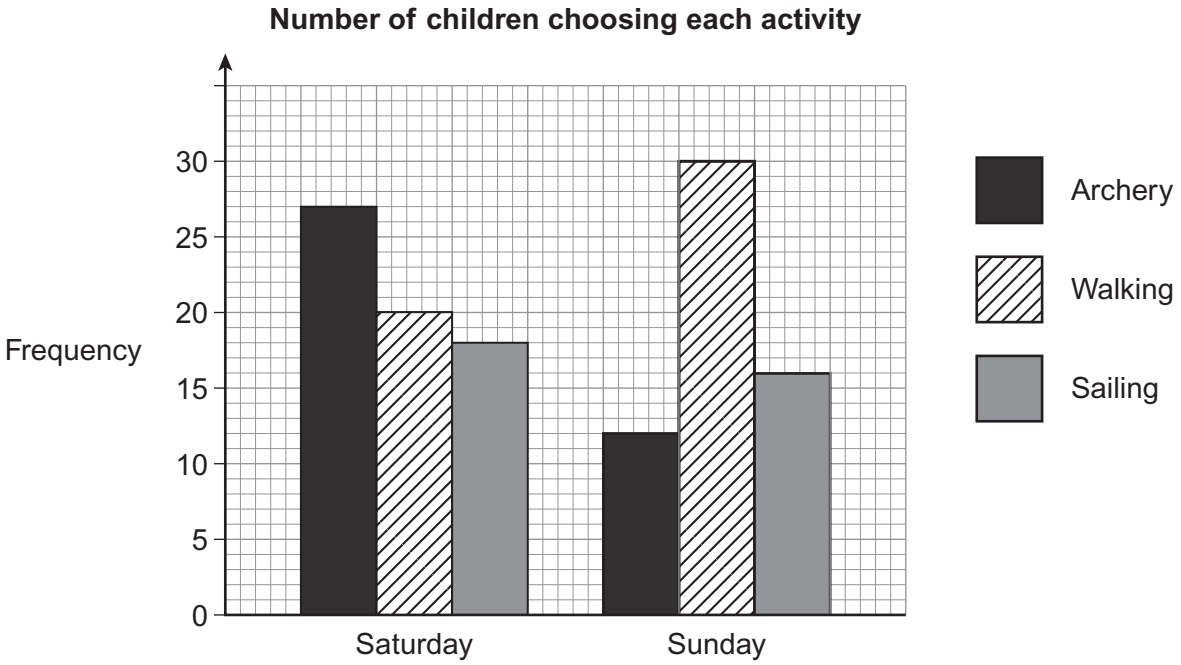
Answer $ .....

Turn over for the next question

7

11 An outdoor centre has activities for children.



11 (a) Adults help with **walking** in the ratio

number of adults : number of children = 1 : 5

3 adults can help with walking on **Saturday**.

Is this enough?
You **must** show your working.

[2 marks]

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11 (b) A group of people go **sailing** in the ratio

number of adults : number of children = 1 : 2

What fraction of the group are adults?

[1 mark]

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Answer .....

11 (c) On **Sunday** all the children do the activity they choose.

The ratios for each activity are shown in the table.

Activity	**Number of adults : number of children**
Archery	1 : 3
Walking	1 : 5
Sailing	1 : 2

Work out the total number of adults needed for Sunday.

[3 marks]

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Answer .....

6

12 In a game a team scores

2 points for a win
1 point for a draw
0 points for a loss.

A team plays four games.

There are six combinations of results that score **at least 5** points.

Complete the table to show these combinations.

[3 marks]

Number of wins	Number of draws	Number of losses	Total score
4	0	0	8
3	1	0	7

13 Four numbers have a mean of 10
The median is 8

Two of the numbers are 1 and 5

Work out the other two numbers.

[3 marks]

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Answer ..... and .....

14 Jess wants to know the number of people who live in her street.
She carries out a survey.

Which **two** words describe the data she collects?
Circle your answers.

[2 marks]

Primary Secondary Discrete Continuous

END OF QUESTIONS

8

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