Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Pages	Mark
2 – 3	
4 – 5	
6 – 7	
8 – 9	
10 – 11	
12	
TOTAL	

General Certificate of Secondary Education
Foundation Tier
November 2011

Mathematics 43601F

Unit 1

Wednesday 9 November 2011 1.30 pm to 2.30 pm

F

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 4 and 5. 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 booklet.

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

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

1 The table shows information about the main holiday of 200 students in 2011.

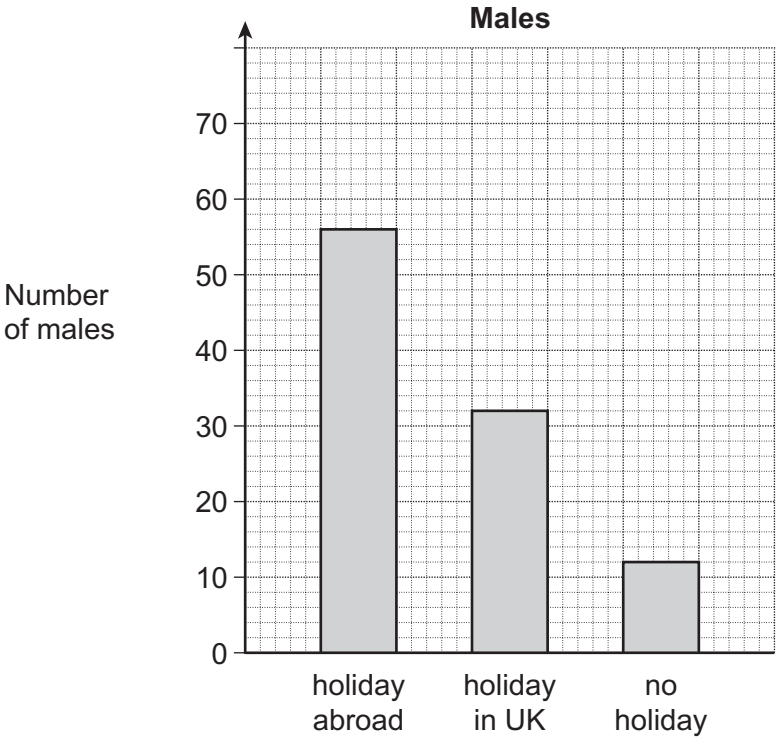
	Holiday abroad	**Holiday in UK**	**No holiday**	**Total**
Male	56	32	12	100
Female	70	24		100

1 (a) Complete the table.

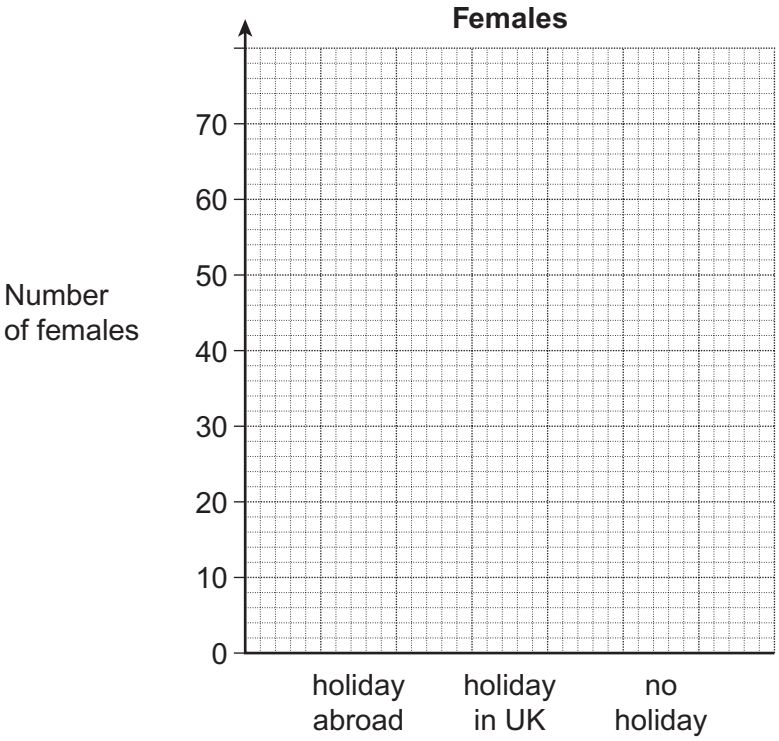
.....

(2 marks)

1 (b) The bar chart shows the information for males.



Draw the bar chart for females.



(3 marks)

1 (c) A travel firm sells holidays to students for 2012.

Do you think they will sell more holidays abroad or holidays in the UK?
Tick a box.

Holidays abroad ☐ Holidays in UK ☐ Cannot tell ☐

Give a reason for your answer.

.....

.....

(1 mark)

1 (d) The information for males and females could be shown on a dual bar chart.

Why might this be a good idea?

.....

.....

(1 mark)

7

2 John buys a phone.
He looks at the cost of 60 applications (apps).

Cost of application	Number of applications
free (0p)	30
59p	16
99p	5
£1.29	2
£1.49	1
£1.99	6

2 (a) John buys all the applications costing £1.99

How much does he pay?

.....

Answer £ ..... *(2 marks)*

2 (b) What fraction of the 60 applications are free?
Give your answer in its simplest form.

.....

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

2 (c) What percentage of the 60 applications cost £1.99?

.....

.....

Circle the correct answer.

6% 10% 16% 60%

(1 mark)

2 (d) John wants to know the make of phone used by people in his class.

Write down a suitable data collection method.

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

3 (a) Tick the correct column for each statement.

Statement	Never True	Sometimes True	Always True
An impossible event has a probability of –1			
An event which is unlikely has a probability of 0.75			
An event which is certain has a probability of 1			

(3 marks)

3 (b) Put these probabilities in order starting with the lowest.

0.3 $\frac{1}{3}$ 33%

Lowest .....

.....

Highest .....

(2 marks)

11

*4 Ian sells cans of drinks.

4 (a) The table shows the percentages of drinks sold on Monday morning.

Drink	Percentage Sold
Cola	30 %
Lemonade	20 %
Orange	50 %

Draw a pie chart for the data.

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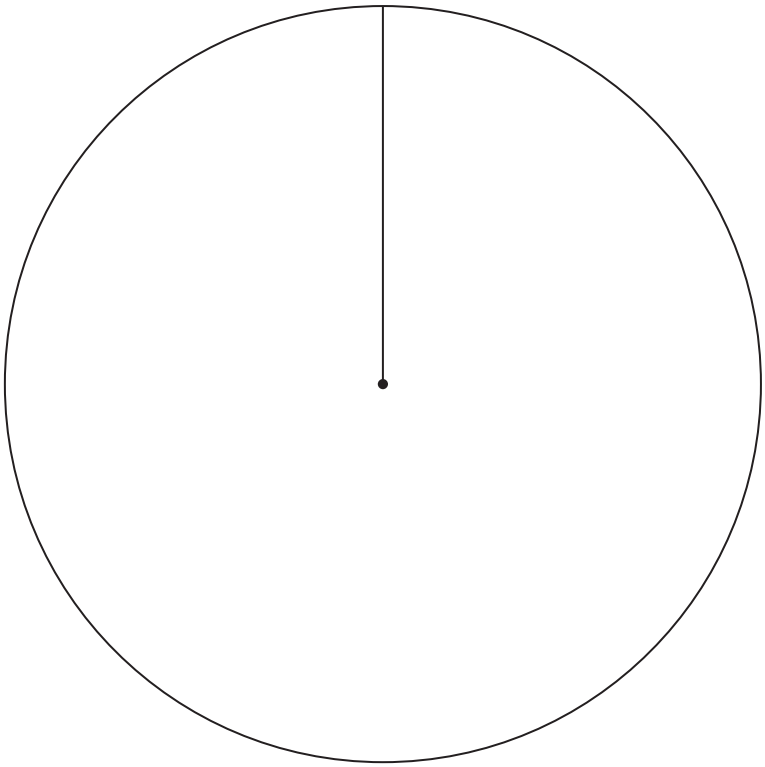
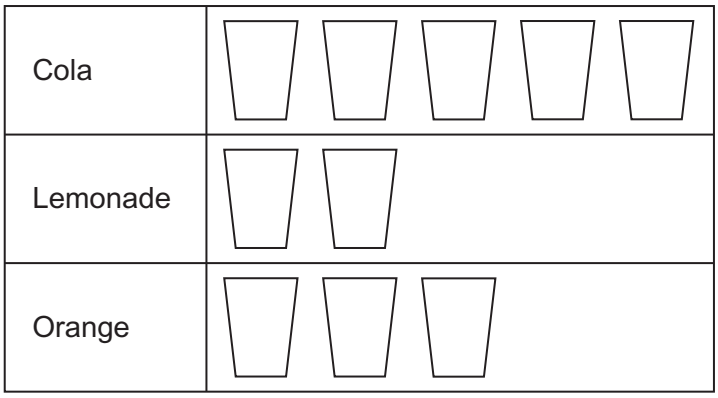


(4 marks)

4 (b) The pictogram shows information about the drinks sold on Monday afternoon.
The key is missing.



80 cans were sold that afternoon.

How many cans of cola were sold?

.....

.....

.....

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

4 (c) 80 cans were also sold in the morning.

4 (c) (i) Write down **one** difference between the cans sold in the morning and in the afternoon.

.....

.....

(1 mark)

4 (c) (ii) Ian orders more cans.

Which flavour should he order least of, based on Monday's sales?
Circle your answer.

Cola Lemonade Orange

(1 mark)

9

***5** A 10p coin and a 2p coin are tossed.

List **all** the possible outcomes.
Use H for heads and T for tails.

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.....

.....

(2 marks)

6 Here is a list of numbers.

0 3 5 7 12 29

6 (a) Write down **three** numbers from the list with a median of 7.

Answer ..... , ... and ..... *(1 mark)*

6 (b) Write down **three** numbers from the list with a range of 7.

.....

.....

Answer ..... , ... and ..... *(1 mark)*

6 (c) Find **three** numbers from the list with a mean that is a whole number.

.....

.....

Answer ..... , ... and ..... *(2 marks)*

6 (d) Find **three** numbers from the list with the range double the median.
Write down the values of the range and median.

.....

.....

.....

.....

.....

Answer ..... , ... and .....

Range = ... Median = ... *(3 marks)*

7 Liz is buying a new car and selling her old car.
Here are three offers for the same model of new car.

Offer 1
New car £10 599
If old car given to garage
£3375 off

Offer 2
New car £11 100
If old car given to garage
$\frac{1}{3}$ off

Offer 3
New car £9600
If old car given to garage
25% off

Which offer is best?
You **must** show your working.

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.....

Answer ..... *(5 marks)*

14

8 Olivia usually drives home from work.
Some of her journey times are shown.

Week 1

	Mon	Tue	Wed	Thu	Fri
Leaves work (pm)	5.13	5.24	5.30	5.28	5.02
Arrives home (pm)	5.55	6.03	6.15	6.06	5.32
Time taken (minutes)	42	39	45	38	30

Week 2

	Mon	Tue	Wed	Thu	Fri
Leaves work (pm)	5.15	5.18	5.20	5.07	5.10
Arrives home (pm)	5.49	5.50	5.57	5.40	
Time taken (minutes)		32	37	33	121

8 (a) How long did it take Olivia to drive home on Monday of week 2?

Answer .....…..…..…..…..... minutes *(1 mark)*

8 (b) On Friday of week 2 Olivia walked home.

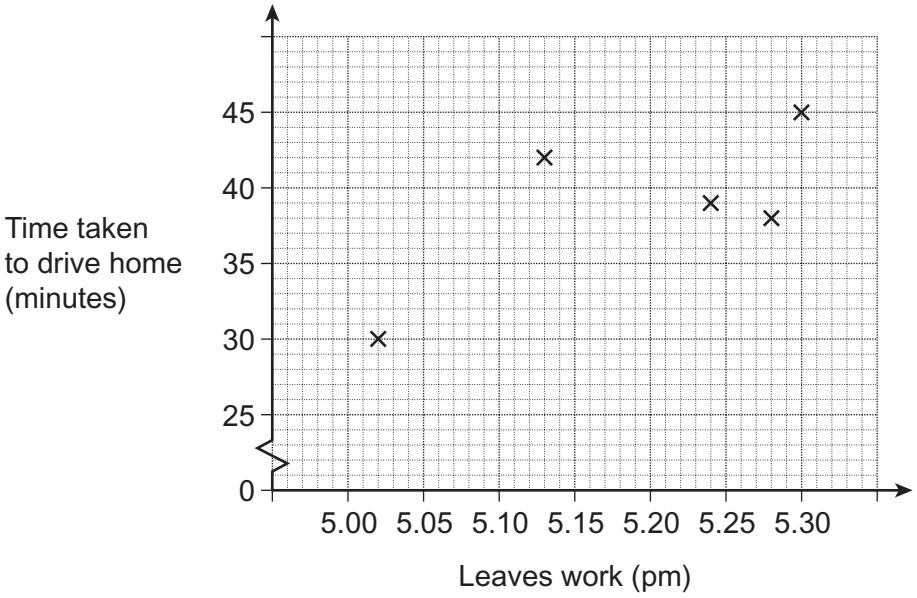
What time did she arrive home?

.....

.....

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

8 (c) Complete the scatter diagram for the **four** days she drives home in week 2.



(2 marks)

8 (d) Estimate the time Olivia would have arrived home on Friday of week 2 if she had driven.
Use your scatter diagram to show how you decide.

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.....

Answer .....…..…..…..…..…..... pm *(3 marks)*

Turn over for the next question

8

9 People in a town voted in an election.
The probability a vote was given to a particular party is shown.
One value is missing.

Party	Probability
Conservative	0.41
Labour	0.24
Liberal Democrat	0.22
UKIP	
Other	0.04

9 (a) Complete the table.

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.....

(2 marks)

9 (b) There are 15 000 people in the town.
8000 voted.

How many people in the town did **not** vote Conservative?

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.....

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

END OF QUESTIONS

5