EDEXCEL GCSE MATHEMATICS (MODULAR 2381)

MATHS



EXAM QUESTION PACK

UNIT 1 (PAPER 5) FOUNDATION TIER 5381F PAPERS

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)

Foundation Tier

Unit 1 Test – Data Handling

Thursday 17 November 2011 – Morning

Time for Section A: 20 minutes

Examiner's use only

Team Leader's use only



Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 4 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION A

Answer ALL FOUR questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You may use a calculator in this section.

1. Ruben carries out a traffic survey.
He records the colour of all the cars that pass his house.

Here are his results.

Red	Blue	Green	Red	Green
Silver	Silver	Red	Silver	Silver
Red	Green	Silver	Silver	Red
Blue	Silver	Red	Green	Blue
Silver	Red	Blue	Green	Blue

(a) Complete the frequency table for his results.

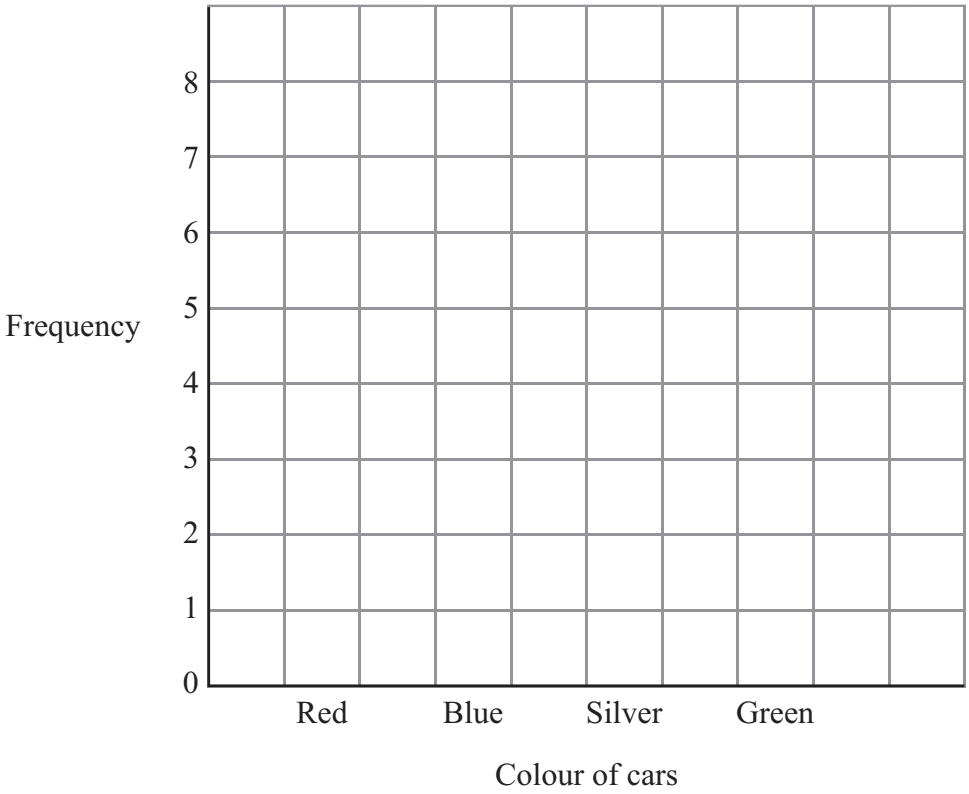
Colour	Tally	Frequency
Red		
Blue		
Silver		
Green		

(2)

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Leave blank

(b) On the grid, draw a bar chart to show this information.



(2)

(c) What colour is the mode?

.....

(1)

Q1

(Total 5 marks)

2. There are three blue balls and one red ball in a bag.
Hannah takes, at random, a ball from the bag.

Write down the probability that Hannah takes a red ball.

Q2

.....

(Total 1 mark)

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3. A basketball team played 8 games.

Here is the number of points they scored in each game.

24 36 18 25 45 36 48 20

(a) Work out their median score for these 8 games.

..... points
(2)

(b) Work out their mean score.

..... points
(2)

The basketball team played one more game.

Their mean score for all 9 games is 32

(c) How many points did the team score in the 9th game?

..... points
(2)

(Total 6 marks)

Q3

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4. Jonty made 30 flights in his plane last year.

The table gives some information about the length of time t, in minutes, of each flight.

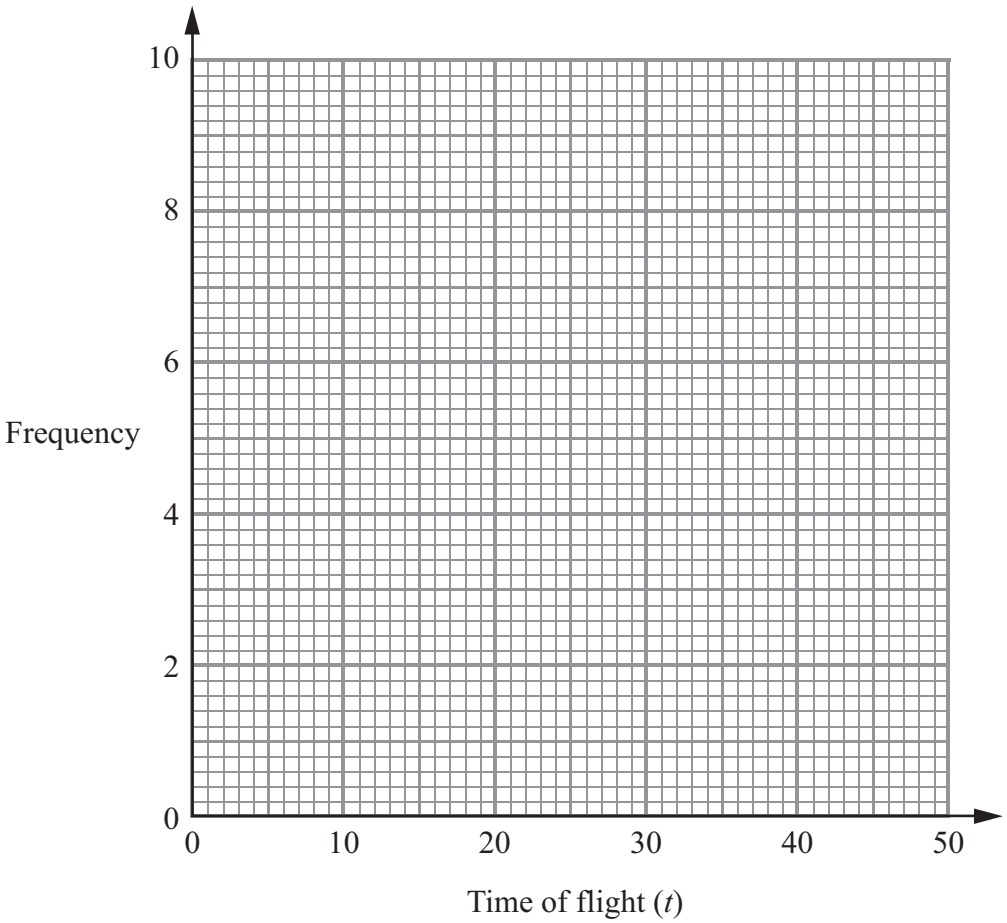
Time of flight (t)	Frequency
$0 < t \leqslant 10$	9
$10 < t \leqslant 20$	8
$20 < t \leqslant 30$	3
$30 < t \leqslant 40$	6
$40 < t \leqslant 50$	4

(a) Write down the class interval that contains the median.

.....

(1)

(b) On the grid below, draw a frequency polygon to show this information.



(2) **Q4**

(Total 3 marks)

TOTAL FOR SECTION A: 15 MARKS

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

Examiner's use only

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Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Thursday 17 November 2011 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

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SECTION B

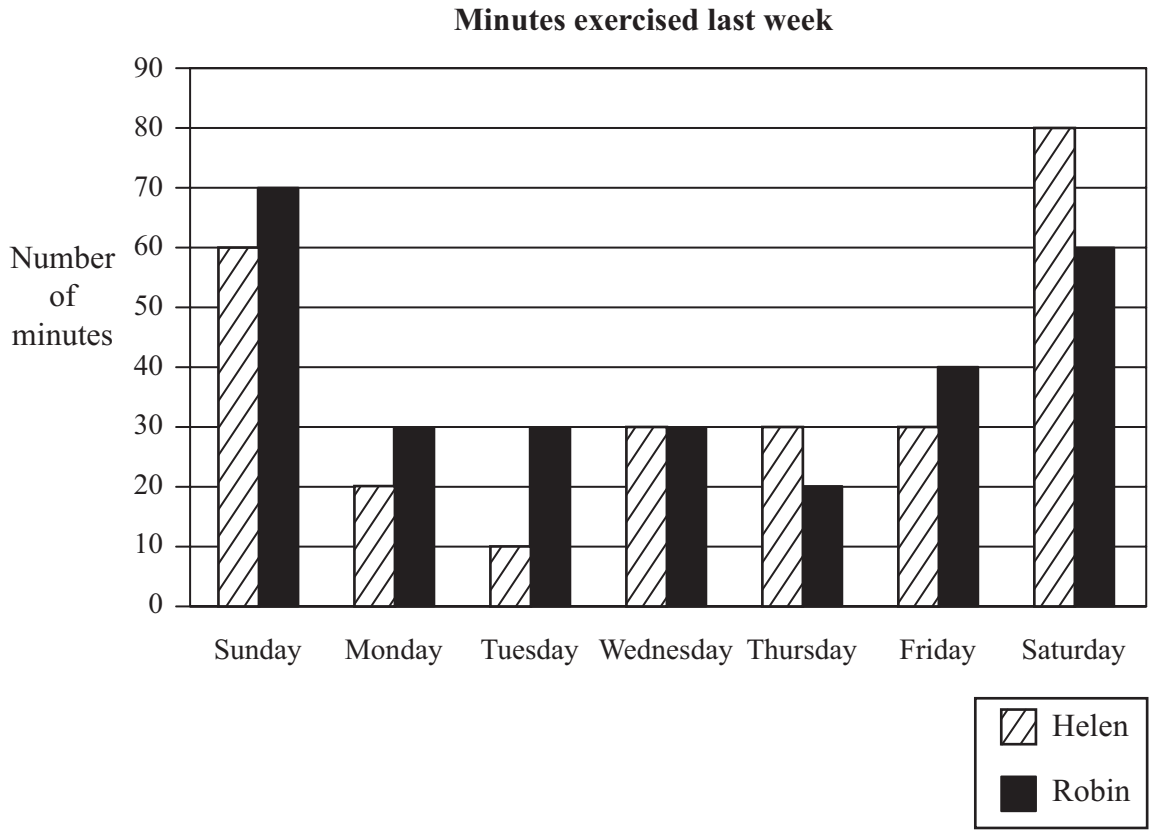
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator in this section.

1. Helen and Robin exercise each week.
The bar chart shows the number of minutes they each exercised last week.



(a) Write down the number of minutes Helen exercised on Monday.

..... minutes
(1)

(b) On which day did Helen and Robin exercise for the same number of minutes?

.....
(1)

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(c) In total, Helen exercised for more minutes than Robin on Friday and Saturday.

How many more minutes?

.....

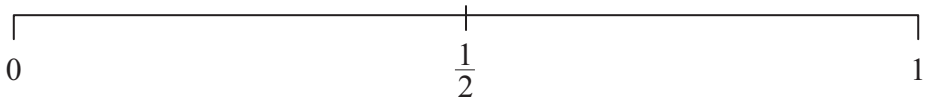
(2)

Q1

(Total 4 marks)

2. Nathan flips a coin.

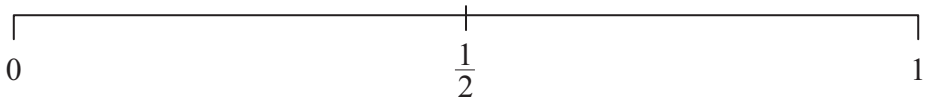
(a) On the probability scale, mark with a cross (×) the probability that the coin lands on tails.



(1)

Dave throws an ordinary 6-sided dice numbered from 1 to 6

(b) On the probability scale, mark with a cross (×) the probability that he throws a 7



(1)

Q2

(Total 2 marks)

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Leave blank

3. Narinder has 100 songs on his MP3 player.

The two-way table shows some information about these songs.

(a) Complete the two-way table.

	Rock	Pop	Classical	Total
less than 3 minutes	10		0	20
between 3 and 6 minutes		20	10	
over 6 minutes	5			
Total	35	40		100

(3)

Narinder plays, at random, one of these songs.

(b) What is the probability that he plays a Pop song that is between 3 and 6 minutes long?

.....

(2)

Q3

(Total 5 marks)

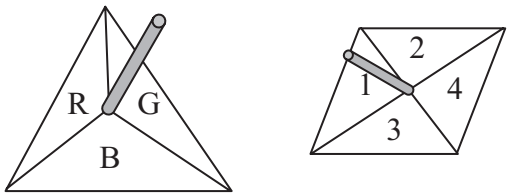
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4. The diagram shows two fair spinners.

The 3-sided spinner can land on Red (R) or Green (G) or Blue (B).
The 4-sided spinner can land on 1 or 2 or 3 or 4

Benjamin spins both spinners once.
Write down all the possible outcomes.
One has already been done for you.



(R,1) .....

.....

.....

.....

Q4

(Total 2 marks)

5. Nathalie wants to carry out a survey to find out how much money her friends spend on buying music.

She uses this question in a questionnaire.

"How much money do you spend on buying music?"

A little? ☐ Not much? ☐ Quite a lot? ☐

Write down **two** things wrong with this question.

1 .....

.....

2 .....

.....

Q5

(Total 2 marks)

TOTAL FOR SECTION B: 15 MARKS
TOTAL FOR PAPER: 30 MARKS

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Mark Scheme (Results)

November 2011

GCSE Mathematics (2381)
Paper 5381F_5A (Calculator)

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November 2011

Publications Code UG029728

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NOTES ON MARKING PRINCIPLES

1 Types of mark

M marks: method marks
A marks: accuracy marks
B marks: unconditional accuracy marks (independent of M marks)

2 Abbreviations

cao – correct answer only
isw – ignore subsequent working
oe – or equivalent (and appropriate)
indep - independent
ft – follow through
SC: special case
dep – dependent

3 No working

If no working is shown then correct answers normally score full marks
If no working is shown then incorrect (even though nearly correct) answers score no marks.

4 With working

If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.
If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.
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6 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: e.g. incorrect canceling of a fraction that would otherwise be correct
It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect e.g. algebra.
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Unless otherwise stated, when any answer is given as a range (e.g 3.5 – 4.2) then this is inclusive of the end points (e.g 3.5, 4.2) and includes all numbers within the range (e.g 4, 4.1).

5381F_5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)	Red 7 Blue 5 Silver 8 Green 5	Correct frequencies	2	B2 for all frequencies correct (B1 for 2 tallies or 2 frequencies correct)
	(b)		Correct bars	2	B2 ft for all bar heights correct with or without gaps (B1 ft for 2 bar heights correct)
	(c)		Silver	1	B1 ft
2			$\frac{1}{4}$	1	B1 for $\frac{1}{4}$ oe
3	(a)	18, 20, 24, 25, 36, 36, 45, 48 (25+36) ÷ 2	30.5	2	M1 for ordering data or selecting mid values without ordering A1 for 30.5 cao
	(b)	24+36+18+25+45+36+48+20 = 252 252 ÷ 8 =	31.5	2	M1 for evidence of adding all 8 scores and dividing by 8 A1 cao
	(c)	32 × 9 = 288 288 – 252 =	36	2	M1 for attempt to multiply 32 by 9 or 288 seen A1 cao

5381F_5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
4	(a)		$10 < t \leq 20$	1	B1 cao
	(b)		Frequency polygon	2	B2 for complete polygon (ignore histograms and any lines below a time of 5 or above a time of 45, but award B1 if there is a line joining the first point to the last point) (B1 for: only one plotting error of the points and points joined with line segments or plotting all points correctly but not correctly joining with line segments (in this case ignore a line joining first point to last point) or incorrect but consistent plotting of all points within each interval (not midpoints) and correctly joining the points with line segments (in this case ignore a line joining first point to last point)) Plotting tolerance ± half square Points to be joined by straight lines but not curves. Accept ruled or hand-drawn lines.

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Mark Scheme (Results)

November 2011

GCSE Mathematics (2381)
Paper 5381F_5B (Non-Calculator)

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November 2011

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5381F_5B					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		20	1	B1 cao
	(b)		Wednesday	1	B1 cao
	(c)	Helen 30 + 80 = 110 Robin 40 + 60 = 100	10	2	M1 for adding Helen's times and Robin's times and attempt at subtracting A1 for 10
2	(a)		x marked at ½	1	B1 for x marked at ½
	(b)		x marked at 0	1	B1 for x marked at 0
3	(a)	10 **10** 0 20 **20** 20 10 **50** 5 **10** **15** **30** 35 40 **25** 100	- 10 - - 20 - - 50 - 10 15 30 - - 25 -	3	B3 all 7 extra entries correct (B2 for 4, 5 or 6 extra entries correct) (B1 for 1, 2 or 3 extra entries correct)
	(b)	$\frac{20}{100}$	$\frac{1}{5}$	2	M1 for probability written as a fraction oe with numerator 20 or denominator 100 A1 for 20/100 or 1/5 oe
4			(R, 1); (R, 2); (R, 3); (R, 4); (G, 1); (G, 2); (G, 3); (G, 4); (B, 1); (B, 2); (B, 3); (B, 4)	2	B2 for all 12 correct combinations seen with no incorrect combinations, ignore duplicates (B1 for at least 3 extra correct combinations)
5			No time scale specified Response boxes too vague	2	B2 for 2 of the following traits: • No time frame • Response boxes too vague (not specific) • No zero response box, oe (B1 for just one of the above traits)

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Mark Scheme (Results)

June 2011

GCSE Mathematics (5381F)
Paper 5B (Non-Calculator)

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)(i)		21	2	B1 cao
(ii)		28		B1 cao
(b)	3 × full stick people	Diagram	1	B1 oe
(c)	4 full stick people + 1 no leg	Diagram	1	B1 oe
2 (a)		blue	1	B1 cao
(b)		yellow	1	B1 cao
(c)		$\frac{4}{14}$	2	B2 oe (B1 for n/14, n<14 or 4/n, n>4 or 4 in 14, 4 out of 14, 4 : 14 oe)
(d)	eg need 3 or more. (was 4R, 5B, 3G, 2Y) (now 4R, 5B, 5G, 2Y)	Reason	1	B1 eg Two green then green same as blue (max) so not the most popular; eg Two modes since green and blue are the same so joint most popular eg They are the same number eg Need 3 green.
3 (a)	(40, 60) and (50, 75)	Points Plotted	1	B1 for points plotted within guidelines
(b)	eg as one goes up the other goes up	Relationship	1	B1 for eg as one goes up the other goes up (accept positive correlation)
(c)		Line	1	B1 for line drawn between (14,16) and (14,38) to (60,60) and (60,82)
(d)		62–82	1	B1 for 62–82 or ft their lobf with positive gradient (tolerance ± 1 square)

5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
4	N1 N2 N3 E1 E2 E3 W1 W2 W3 S1 S2 S3	12 outcomes	2	B2 for all 12 (no extras or repeats, ignore N3 repeated) (Accept 1E, 2E etc) (B1 for at least 6 extra correct)

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Tuesday 1 March 2011 – Morning

Time for Section A: 20 minutes

Examiner's use only

Team Leader's use only

Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 6 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
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Leave blank

SECTION A

Answer ALL SIX questions.

Write your answers in the spaces provided.

You may use a calculator in this section.

You must write down all stages in your working.

1. The pictogram shows information about the numbers of cars in a car park on 5 days last week.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Key:  means 20 cars

(a) Write down the number of cars in the car park on Friday.

.....

(1)

(b) Estimate the number of cars in the car park on Thursday.

.....

(1)

Q1

(Total 2 marks)

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Leave blank

2. Here is a list of words.

impossible	unlikely	even	likely	certain

Write down the word from the list to **best** describe the probability

(a) that Emma will get a head when she spins an ordinary coin,

.....

(1)

(b) that David will get an 8 when he rolls an ordinary six-sided dice.

.....

(1) **Q2**

(Total 2 marks)

3. The table gives some information about 7 families and their holidays.

Name of family	Number of people in family	Country of holiday	Number of days of holiday	Type of accommodation
Brown	4	France	14	Hotel
Drake	4	Spain	21	Chalet
Adams	5	Austria	10	Tent
Mendez	3	France	7	Hotel
Singh	6	Italy	10	Hotel
Hale	5	France	14	Chalet
Clark	5	Germany	7	Tent

(a) Which families had a holiday for exactly 10 days?

.....

(1)

Some of the families went to France and stayed in a hotel.

(b) Which of these families had the greater number of people in the family?

.....

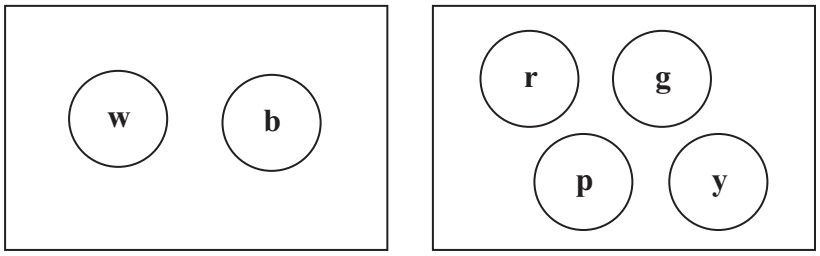
(1) **Q3**

(Total 2 marks)

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Leave blank

4. Fiona has two boxes, Box A and Box B.



Box A **Box B**

In Box A there are 1 white counter and 1 black counter.
In Box B there are 1 red counter, 1 green counter, 1 pink counter and 1 yellow counter.

Fiona takes at random a counter from Box A and a counter from Box B.

(a) Write down all the possible combinations that she can take.

.....

.....

.....

.....

(2)

(b) Find the probability that Fiona takes a white counter from Box A and a red counter from Box B.

.....

(1)

Q4

(Total 3 marks)

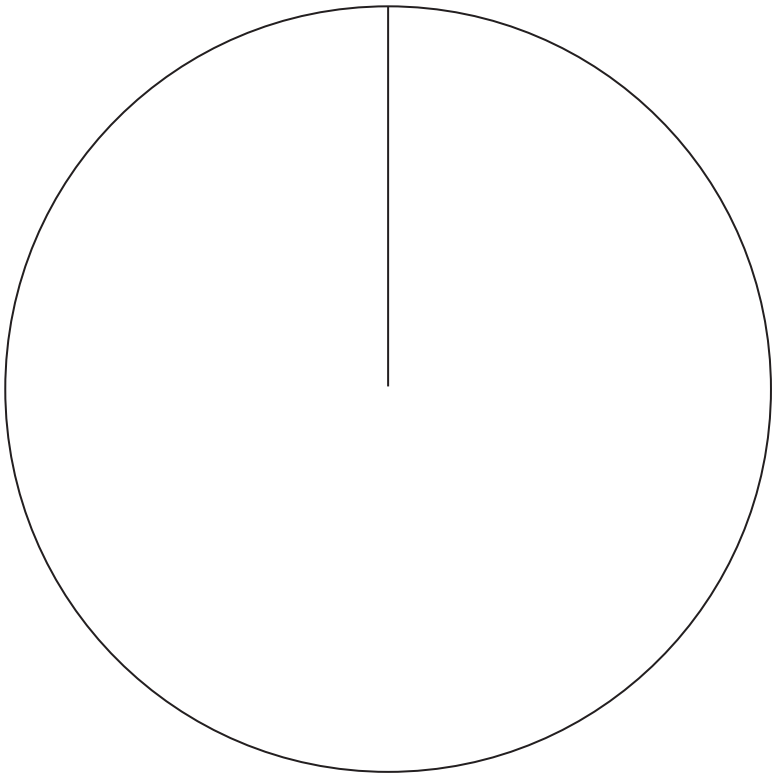
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Leave blank

5. The table gives information about the types of milk and the amounts of milk sold in a shop one day.

Type of milk	**Soya**	**Full fat**	**Semi-skimmed**	**Skimmed**
Amount (in litres)	75	54	291	120

Draw a pie chart to show this information.



Q5

(Total 3 marks)

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Leave blank

6. The table gives information about the weights of 50 letters.

Weight of letter (w grams)	Frequency
$50 < w \leqslant 100$	4
$100 < w \leqslant 150$	6
$150 < w \leqslant 200$	10
$200 < w \leqslant 250$	18
$250 < w \leqslant 300$	12

Work out an estimate for the mean weight.

..... grams

Q6

(Total 3 marks)

TOTAL FOR SECTION A: 15 MARKS

END

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Tuesday 1 March 2011 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

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SECTION B

Answer ALL SIX questions.

Write your answers in the spaces provided.

You must NOT use a calculator in this section.

You must write down all stages in your working.

1. Carina asked each of her friends which newspaper they liked the best.
Here are her results.

Times	Mirror	Mirror	Mirror	Times
Sun	Telegraph	Times	Sun	Mirror
Telegraph	Sun	Times	Telegraph	Mirror
Mirror	Guardian	Telegraph	Mirror	Telegraph

(a) Complete the frequency table.

Newspaper	Tally	Frequency
Times		
Mirror		
Sun		
Telegraph		
Guardian		

(2)

Carina says that the Telegraph is the mode.

(b) Is she right?
Give a reason for your answer.

.....

.....

(1) **Q1**

(Total 3 marks)

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2. The table gives information about the heights, in cm, of 7 students.

Name	**John**	**Charles**	**Mary**	**Debby**	**Steve**	**Sasha**	**Haji**
Height	162	174	158	155	160	159	165

Write down the name of the student with the median height.

.....

(Total 2 marks)

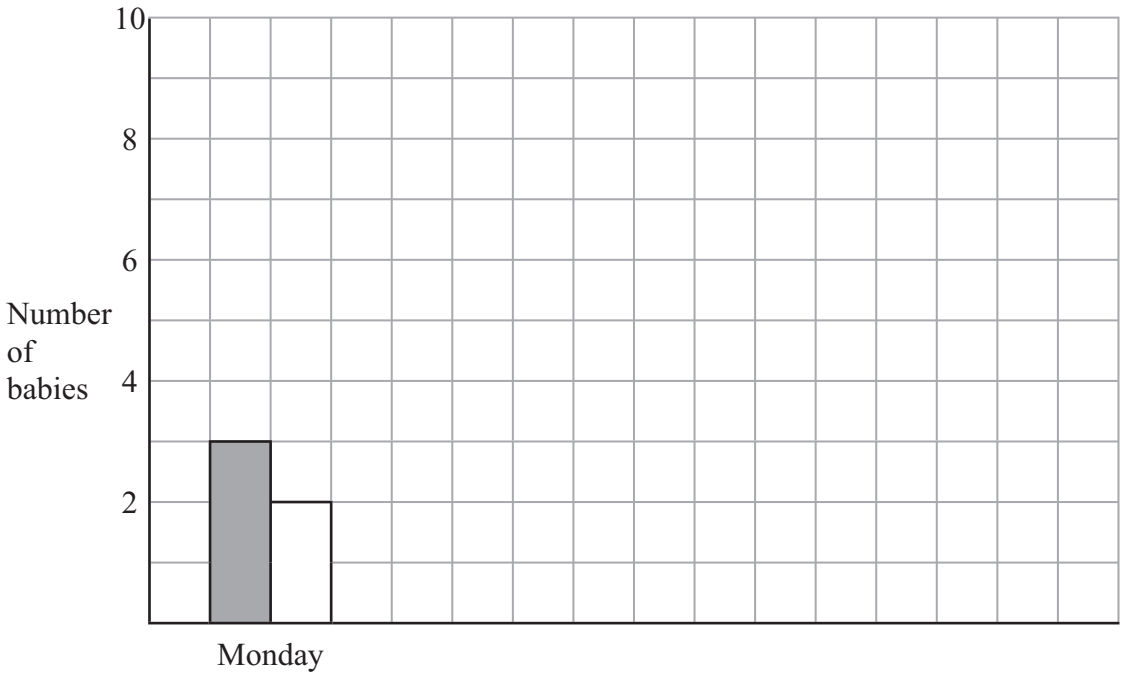
Q2

3. The table gives information about the number of male babies and female babies born in a hospital on each of 5 days last week.

Day	**Mon**	**Tues**	**Wed**	**Thurs**	**Fri**
Male	3	4	5	3	6
Female	2	3	4	6	6

Complete the bar chart to show this information.

Key	
	Male
	Female



(Total 2 marks)

Q3

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4. A student recorded the number of points a basketball team scored in each game it played.
He drew this stem and leaf diagram for his results.

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

Key:
4 | 1 means 41 points

(a) How many games did the basketball team play?

.....

(1)

(b) Work out the range.

.....

(2)

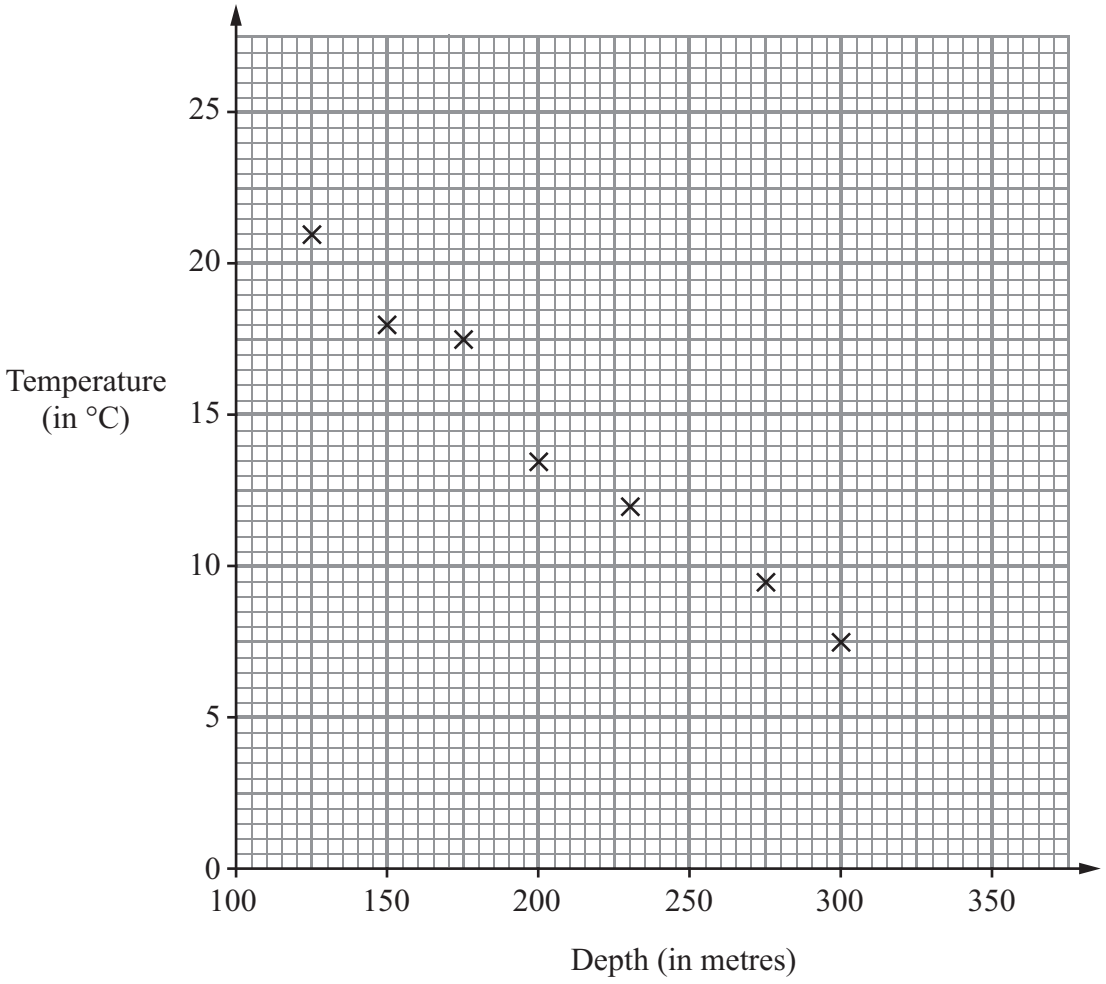
Q4

(Total 3 marks)

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Leave blank

5. A scientist recorded the temperature of the sea at each of 7 depths.
The scatter graph shows information about these temperatures.



(a) Describe the relationship between the depth and the temperature of the sea.

.....

.....

(1)

(b) Estimate the temperature of the sea at a depth of 250 metres.

..... °C

(2)

Q5

(Total 3 marks)

Leave blank

6. There are only red crayons, blue crayons, green crayons and yellow crayons in a bag.
The number of green crayons in the bag is equal to the number of yellow crayons in the bag.

One of the crayons is taken at random.
The probability that the crayon will be red is 0.45
The probability that the crayon will be blue is 0.25

Work out the probability that the crayon will be green.

Q6

.....

(Total 2 marks)

TOTAL FOR SECTION B: 15 MARKS
TOTAL FOR PAPER: 30 MARKS

END

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Mark Scheme (Results)

March 2011

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5A

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March 2011
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NOTES ON MARKING PRINCIPLES

1 Types of mark

M marks: method marks
A marks: accuracy marks
B marks: unconditional accuracy marks (independent of M marks)

2 Abbreviations

cao – correct answer only
isw – ignore subsequent working
oe – or equivalent (and appropriate)
indep - independent
ft – follow through
SC: special case
dep – dependent

3 No working

If no working is shown then correct answers normally score full marks
If no working is shown then incorrect (even though nearly correct) answers score no marks.

4 With working

If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.
If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.
If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks. Send the response to review, and discuss each of these situations with your Team Leader.
If there is no answer on the answer line then check the working for an obvious answer.
Any case of suspected misread loses A (and B) marks on that part, but can gain the M marks. Discuss each of these situations with your Team Leader.
If there is a choice of methods shown, then no marks should be awarded, unless the answer on the answer line makes clear the method that has been used.

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5 Follow through marks

Follow through marks which involve a single stage calculation can be awarded without working since you can check the answer yourself, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

6 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: e.g. incorrect canceling of a fraction that would otherwise be correct

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect e.g. algebra.

Transcription errors occur when candidates present a correct answer in working, and write it incorrectly on the answer line; mark the correct answer.

7 Probability

Probability answers must be given a fractions, percentages or decimals. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths).

Incorrect notation should lose the accuracy marks, but be awarded any implied method marks.

If a probability answer is given on the answer line using both incorrect and correct notation, award the marks.

If a probability fraction is given then cancelled incorrectly, ignore the incorrectly cancelled answer.

8 Linear equations

Full marks can be gained if the solution alone is given on the answer line, or otherwise unambiguously indicated in working (without contradiction elsewhere). Where the correct solution only is shown substituted, but not identified as the solution, the accuracy mark is lost but any method marks can be awarded.

9 Parts of questions

Unless allowed by the mark scheme, the marks allocated to one part of the question CANNOT be awarded in another.

10 Money notation

Accepted with and without the “p” at the end.

11 Range of answers

Unless otherwise stated, when any answer is given as a range (e.g 3.5 – 4.2) then this is inclusive of the end points (e.g 3.5, 4.2) and includes all numbers within the range (e.g 4, 4.1).

5381F/5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)	5×20	100	1	B1 cao
	(b)	$20 + 10$	30	1	B1 for answer in range $28 - 35$ (whole number)
2	(a)		Even	1	B1 for even
	(b)		Impossible	1	B1 for impossible
3	(a)		Adams, Singh	1	B1 for both Adams and Singh
	(b)		Brown	1	B1 cao
4	(a)		(W,R), (W,G), (W,P), (W,Y), (B,R), (B,G), (B,P), (B,Y)	2	B2 for 8 correct combinations and no incorrect responses; ignore duplicates (B1 for at least 4 correct combinations and no more than 2 incorrect combinations; ignore duplicates)
	(b)		$\frac{1}{8}$ oe	1	B1 for $\frac{1}{8}$ oe or ft from their combinations

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5381F/5A				
Question	**Working**	**Answer**	**Mark**	**Notes**
5	$75+54+291+120=540$ e.g. Soya = $\frac{75}{540}\times 360=50$ Full fat = 36 Semi skimmed = 194 Skimmed = 80	Pie chart	3	B3 for a fully correct and labeled pie chart – at least **three** angles must be correct (tolerance of $\pm 2^{o}$) **use overlay or angle measure** [B2 for a correct pie chart (at least 3 angles correct with tolerance of $\pm 2°$) with no or incorrect labels **or** for 2 correct sectors ($\pm 2°$)] [B1 for one correct sector ($\pm 2°$) **or** for a clear method (eg. $\frac{75}{'540'}\times 360$) to find the size of one angle – this may be implied by the sight of a correct angle $50°$ **or** $36°$ **or** $194°$ **or** $80°$]
6	$[(4\times 75)+(6\times 125)+(10\times 75)+$ $(18\times 225)+(12\times 275)]\div 50=$ $(300+750+1750+4050+3300)\div 50$ $10150\div 50$	203	3	M1 for $f\times x$ with x used consistently within intervals or at either end (condone 1 arithmetic error or 1 incorrect midpoint) M1 (dep) for $'10150'\div(4+6+10+18+12)$ A1 cao

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Mark Scheme (Results)

March 2011

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5B

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9 Parts of questions

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)		4, 7, 3, 5, 1	2	M1 for at least 2 correct tallies or frequencies A1 for correct frequency column (tally column may be blank) NB: Accept frequencies written in tally column
(b)		Reason	1	B1 for a correct reason, e.g. Mirror is mode **or** Telegraph is not the most popular
2	155, 158, 159, 160, 162, 165, 174	Steve	2	M1 for attempt to put weights in order (condone one error) or for 160 identified A1 for Steve or 160 SC : B1 for Debby or 155
3		Bar chart	2	B2 for fully correct labelled bar chart with bars for males shaded (need not have gaps between days) (B1 for any one of correct bars, correct shading or correct labels)
4 (a)		25	1	B1 cao
(b)	$73 - 30$	43	2	M1 for identifying 30 and 73 A1 cao

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
5 (a)		e.g. as the depth increases so the temperature decreases	1	B1 for negative correlation **or** as the depth increases the temperature decreases (oe) **or** as the depth decreases the temperature increases (oe) **or** the higher the temperature the smaller the depth (oe) **or** the lower the temperature the greater the depth (oe) NB : Accept 'the lower the depth the colder the temperature' oe
(b)		$10-12.5$	2	M1 for a single line segment with negative gradient that could be used as a line /f best fit or a vertical line from 250 A1 for given answer in range $10-12.5$
6	$1-(0.45+0.25)=0.3$	0.15	2	M1 for $1-(0.45+0.25)$ oe **or** 0.3 A1 for 0.15 oe

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Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

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Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)



Foundation Tier

Unit 1 Test – Data Handling

Monday 15 November 2010 – Morning

Time for Section A: 20 minutes

Section	Leave Blank
A	
B	

Materials required for examination
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Tracing paper may be used.

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This section has 5 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

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Work steadily through the paper. Do not spend too long on one question.
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SECTION A

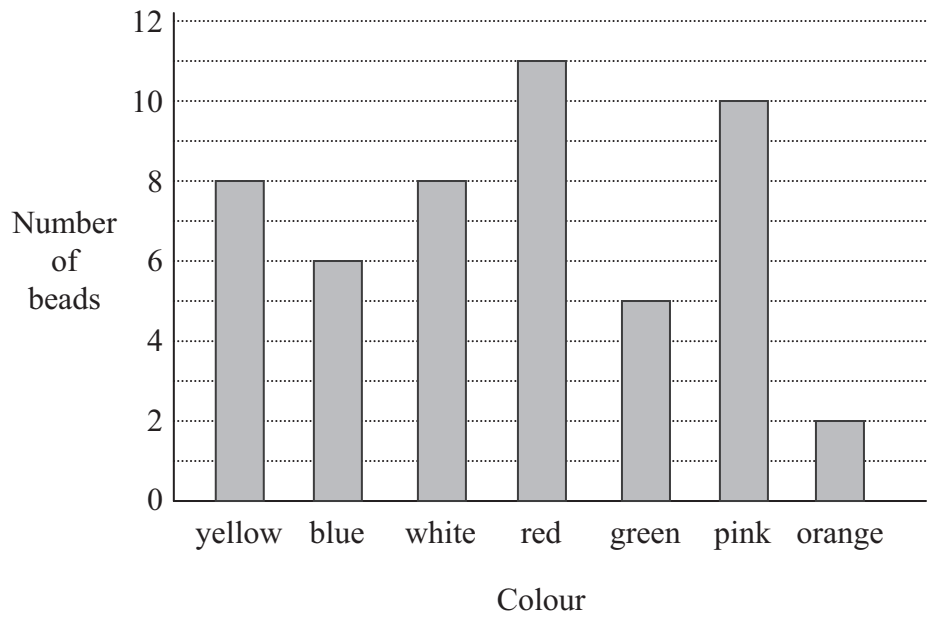
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You may use a calculator in this section.

1. The bar chart gives information about the numbers of coloured beads in a jar.



(a) How many blue beads are in the jar?

.....

(1)

Use the information from the bar chart to complete these sentences with the correct **colours**.

(b) (i) There are the same number of ..... beads as

..... beads.

(ii) There are twice as many pink beads as ..... beads.

(2)

(Total 3 marks)

Q1

N 3 7 7 1 8 A 0 2 0 8

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2. The table shows some information about five people.

Name	Gender	Age (years)	Height (m)	Weight (kg)
Fred	Male	42	1.72	67
Graham	Male	53	1.63	75
Imogen	Female	62	1.47	48
Julie	Female	38	1.68	63
Kevin	Male	56	1.51	71

(a) Which two people are less than 50 years old?

..... and .....

(1)

One male is over 50 years old and weighs less than 73 kg.

(b) Write down the name of this male.

.....

(1)

One person weighs over 65 kg and is taller than 1.65 m.

(c) Write down the name of this person.

.....

(1)

Q2

(Total 3 marks)

N 3 7 7 1 8 A 0 3 0 8

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Leave blank

3. Mr Dee chooses **one** boy and **one** girl to help him.

Boys	**Girls**
Amit George Pete	Hajra Jeannie

One possible combination is (Amit, Hajra).

Write down all the possible combinations that Mr Dee can choose.
The first one has been done for you.

(A, H)

.....

.....

Q3

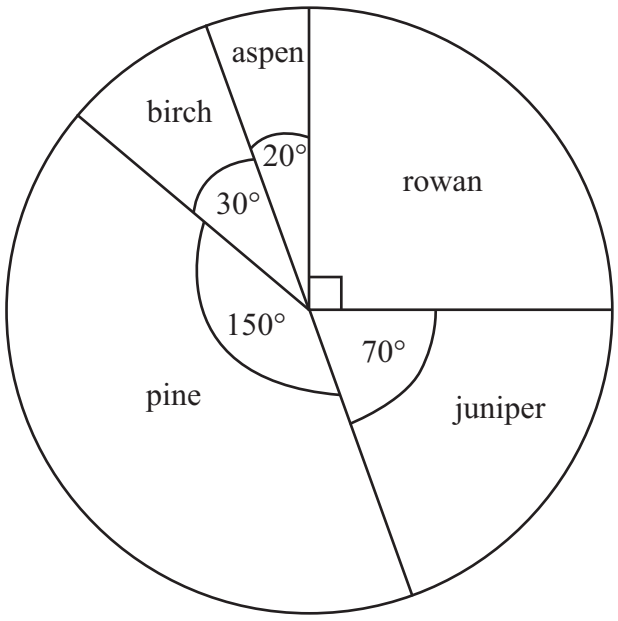
(Total 2 marks)

N 3 7 7 1 8 A 0 4 0 8

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Leave blank

4. Nandini did a survey about how many of each type of tree is in a forest.
The pie chart represents this information.



(a) Which type of tree is the most common?

.....

(1)

There are 450 rowan trees in the forest.

(b) Work out the total number of trees in the forest.

.....

(2)

Q4

(Total 3 marks)

Turn over

N 3 7 7 1 8 A 0 5 0 8

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Leave blank

5. Melissa records the numbers of hours 30 people were at a gym one month.
The table shows information about her results.

Number of hours (n)	**Frequency**		
$5 < n \leqslant 15$	1		
$15 < n \leqslant 25$	10		
$25 < n \leqslant 35$	3		
$35 < n \leqslant 45$	8		
$45 < n \leqslant 55$	8		

Work out an estimate for the mean.

..... hours **Q5**

(Total 4 marks)

TOTAL FOR SECTION A: 15 MARKS

END

N 3 7 7 1 8 A 0 6 0 8

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N 3 7 7 1 8 A 0 7 0 8

BLANK PAGE

N 3 7 7 1 8 A 0 8 0 8

Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Monday 15 November 2010 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

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SECTION B

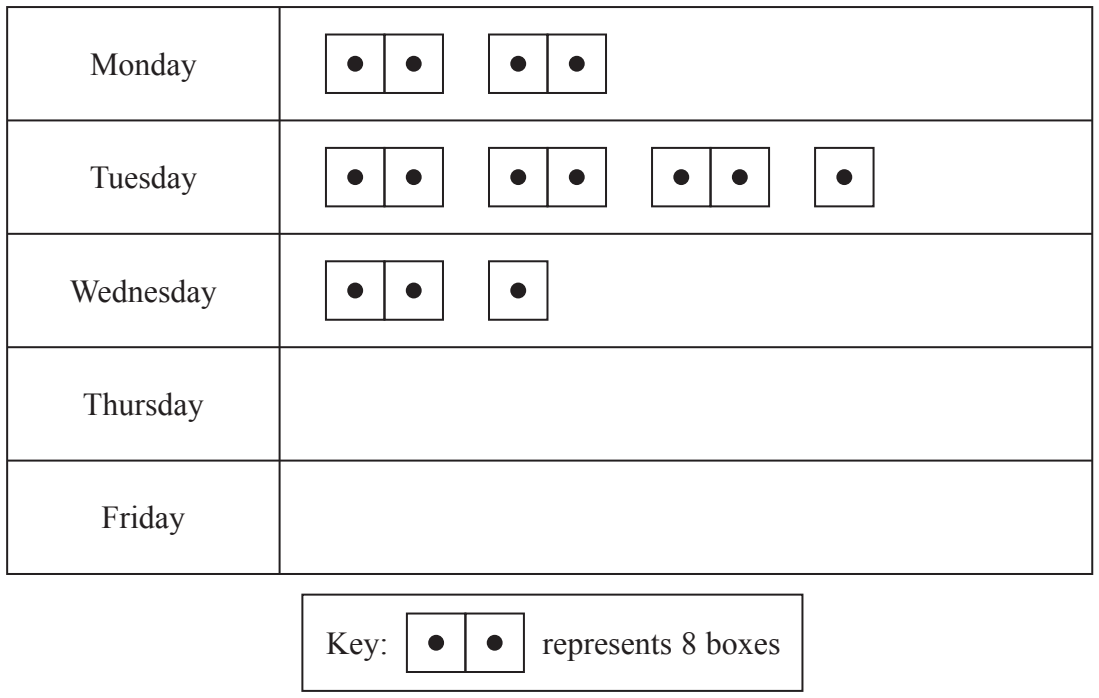
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator in this section.

1. Here is a pictogram.
It shows information about the number of boxes of dominoes sold on Monday, on Tuesday and on Wednesday one week.



(a) Write down the number of boxes of dominoes sold

(i) on Monday,

.....

(ii) on Wednesday.

.....

(2)

There were 24 boxes of dominoes sold on Thursday.
There were 4 boxes of dominoes sold on Friday.

(b) Use this information to complete the pictogram.

(2) **Q1**

(Total 4 marks)

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Leave blank

2. 80 people had a drink of coffee or tea or cocoa.

The two-way table shows some information about their drinks.

	Coffee	**Tea**	**Cocoa**	**Total**
Men	16		4	37
Women		23		
Total	27			80

(a) Complete the two-way table.

(3)

(b) How many men did **not** have coffee?

.....

(1)

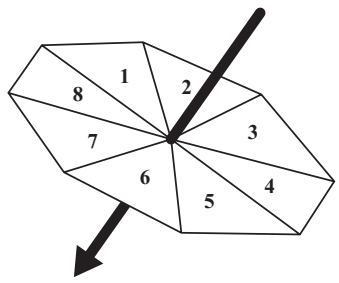
(Total 4 marks)

Q2

3. Here is a fair 8-sided spinner used in a game, with an equal chance of spinning each number.

Mick spins the spinner once.
He will win the game if the spinner lands on a 1 or a 2 or a 3

Work out the probability that Mick will win the game.



.....

(Total 2 marks)

Q3

Turn over

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4. Aviva records the ages of 15 people.

She shows her results in a stem and leaf diagram.

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

Key: 4 | 3 represents 43 years

(a) Find the median age.

..... years
(1)

Eli says

"The range of the ages is 8 because 9 – 1 = 8"

(b) Eli is **wrong**.
Explain why.

.....

.....

(1)

Q4

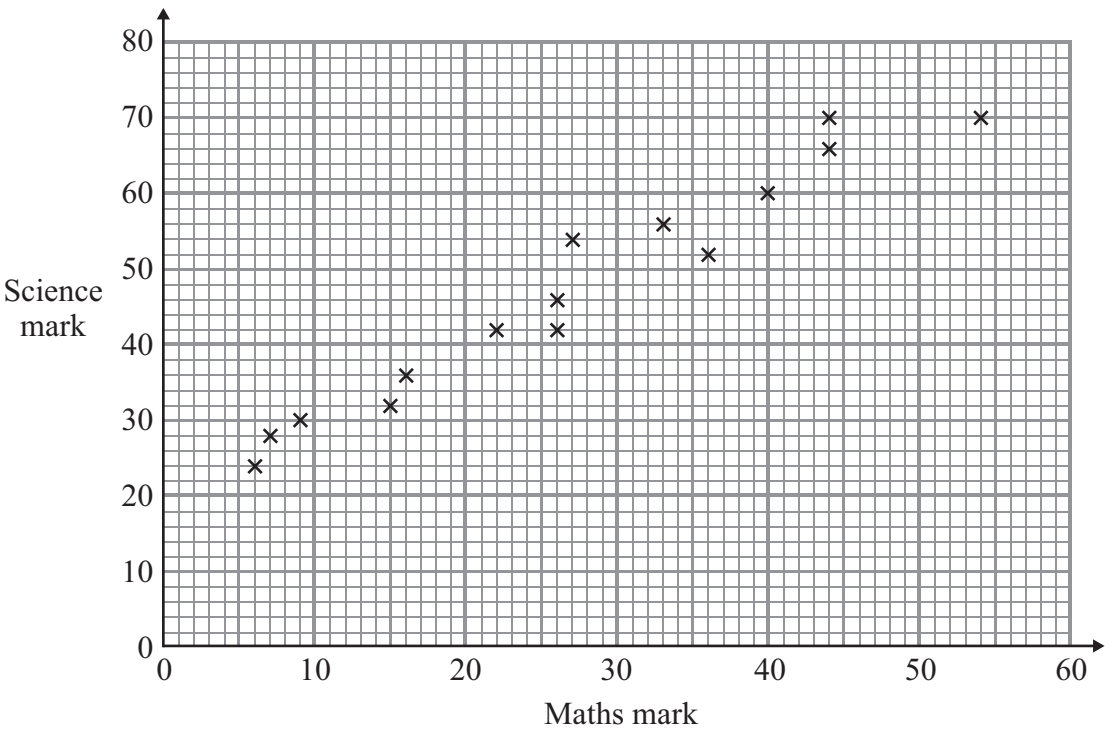
(Total 2 marks)

N 3 7 7 1 5 A 0 4 0 8

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Leave blank

5. 15 students did a Maths test and a Science test.
The scatter graph shows some information about their marks.



(a) Describe the relationship between the Maths marks and the Science marks.

.....

.....

(1)

(b) Draw a line of best fit on the scatter graph.

(1)

Pierre's Maths mark is 18

(c) Use your line of best fit to find an estimate for Pierre's Science mark.

.....

(1)

Q5

(Total 3 marks)

TOTAL FOR SECTION B: 15 MARKS
TOTAL FOR PAPER: 30 MARKS

END

N 3 7 7 1 5 A 0 5 0 8

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N 3 7 7 1 5 A 0 6 0 8

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N 3 7 7 1 5 A 0 7 0 8

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N 3 7 7 1 5 A 0 8 0 8

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Mark Scheme (Results)

November 2010

GCSE

GCSE Mathematics (5381F)
Paper 5A

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Ask The Expert can be accessed online at the following link:

http://www.edexcel.com/Aboutus/contact-us/

November 2010

Publications Code UG025827

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NOTES ON MARKING PRINCIPLES

1 Types of mark

M marks: method marks
A marks: accuracy marks
B marks: unconditional accuracy marks (independent of M marks)

2 Abbreviations

cao – correct answer only
isw – ignore subsequent working
oe – or equivalent (and appropriate)
indep - independent
ft – follow through
SC: special case
dep – dependent

3 No working

If no working is shown then correct answers normally score full marks
If no working is shown then incorrect (even though nearly correct) answers score no marks.

4 With working

If there is a wrong answer indicated on the answer line always check the working in the body of the script (and on any diagrams), and award any marks appropriate from the mark scheme.
If working is crossed out and still legible, then it should be given any appropriate marks, as long as it has not been replaced by alternative work.
If it is clear from the working that the "correct" answer has been obtained from incorrect working, award 0 marks. Send the response to review, and discuss each of these situations with your Team Leader.
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If there is a choice of methods shown, then no marks should be awarded, unless the answer on the answer line makes clear the method that has been used.

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5 Follow through marks

Follow through marks which involve a single stage calculation can be awarded without working since you can check the answer yourself, but if ambiguous do not award.

Follow through marks which involve more than one stage of calculation can only be awarded on sight of the relevant working, even if it appears obvious that there is only one way you could get the answer given.

6 Ignoring subsequent work

It is appropriate to ignore subsequent work when the additional work does not change the answer in a way that is inappropriate for the question: e.g. incorrect canceling of a fraction that would otherwise be correct

It is not appropriate to ignore subsequent work when the additional work essentially makes the answer incorrect e.g. algebra.

Transcription errors occur when candidates present a correct answer in working, and write it incorrectly on the answer line; mark the correct answer.

7 Probability

Probability answers must be given a fractions, percentages or decimals. If a candidate gives a decimal equivalent to a probability, this should be written to at least 2 decimal places (unless tenths).

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5381F/5A				
Question	**Working**	**Answer**	**Mark**	**Notes**
A1 (a)		6	1	B1
(b)(i)		yellow, white	2	B1 for both, any order
(ii)		green		B1
A2 (a)		Fred & Julie	1	B1 for both
(b)		Kevin	1	B1
(c)		Fred	1	B1
A3		[(A,H)], (G,H), (P,H), (A,J), (G,J), (P,J),	2	B2 for correct 5 extra (ignore order and repeats) and no incorrect responses (B1 for 2, 3, 4 or 5 extra with 1 or 2 incorrect), (ignore order and repeats)
A4 (a)		pine	1	B1 cao
(b)	450 × 4	1800	2	M1 for 450 × 4 or 450 ÷ 90 × 360 any other valid complete method e.g. 450 + 350 + 750 + 150 + 100 A1 cao
A5	((10 × 1) + (20 × 10) + (30 × 3) + (40 × 8) + (50 × 8)) = 10 + 200 + 90 + 320 + 400 = 1020 1020 ÷ 30 = 34	34	4	M1 for *fx* with *x* consistent within intervals (including end points) condone one error in multiplication M1 (dep) for use of midpoints condone one error M1 (dep on 1st M1) for use of $\Sigma fx \div \Sigma f$ A1 cao **NB** 1020 seen with an answer of 204 scores 2 marks An answer of 204 without working scores no marks The common response of 30 ÷ 5 = 6 also scores 0.

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Mark Scheme (Results)

November 2010

GCSE

GCSE Mathematics (5381F)
Paper 5B

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November 2010

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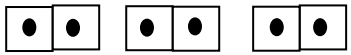
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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
B1 (a)(i)		16	2	B1
(ii)		12		B1
(b)	Thursday		2	B1 for 3 lots of 2 squares with 6 dots
	Friday			B1 for 1 square with 1 dot
B2 (a)		× 17 × | × 11 × 9 | 43 × 40 13 | ×	3	B3 for all 6 correct (B2 for 4 or 5 correct) (B1 for 2 or 3 correct)
(b)		21	1	B1 for 21 or ft from 4 +"17"
B3		$\frac{3}{8}$	2	M1 for attempt to write correct fraction $\frac{x}{8}$ ($x < 8$) or $\frac{3}{x}$ ($x > 3$) A1 for equivalent fraction, decimal or percentage = $\frac{3}{8}$ (SC B1 for 3 in 8 or 3 out of 8 or 3 : 8)
B4 (a)		34	1	B1 cao
(b)		Correct reason given	1	B1 for reason e.g. stem not used, or 4 ¦ 9 = 49 e.g. range is 49 – 11 oe, etc e.g. range is 38

5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
B5 (a)		Valid statement	1	B1 for statement eg the higher the maths mark the higher the science mark, or the lower the science mark the lower the maths mark or as the maths mark goes up the science mark goes up or as the maths mark goes down the science mark goes down etc. (accept positive correlation)
(b)		Line of best fit	1	B1 for a line drawn so that it passes between (5, 20) and (5, 30) and between (50, 62) and (50, 76)
(c)		36 ≤ answer ≤ 42	1	B1 for 36 ≤ answer ≤42 or ft from their straight line segment of positive gradient tolerance ± 1 mark

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Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

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Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)



Foundation Tier

Unit 1 Test – Data Handling

Monday 21 June 2010 – Afternoon

Time for Section A: 20 minutes

Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
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SECTION A

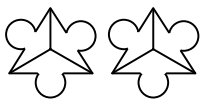
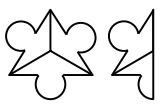
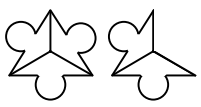
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You may use a calculator in this section.

You must write down all stages in your working.

1. The pictogram shows the numbers of puzzles sold by a shop in March, April and May.

March	
April	
May	
June	

Key:  represents 6 puzzles

(a) Write down the number of puzzles sold in March.

.....

(1)

(b) Write down the number of puzzles sold in May.

.....

(1)

8 puzzles were sold in June.

(c) Use this information to complete the pictogram.

(1) **Q1**

(Total 3 marks)

N 3 6 8 0 5 A 0 2 0 4

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Leave blank

2. Eight students took a test.

Here are their marks.

6 6 6 6 7 8 8 9

(a) Write down the mode.

.....

(1)

(b) Find the range.

.....

(1)

(c) Work out the mean.

.....

(2)

Q2

(Total 4 marks)

3. The two-way table shows some information about the favourite hot drinks of 70 students.

	Tea	**Coffee**	**Chocolate**	**Total**
Male	9	10	17	
Female	8	12		
Total	17			70

Complete the two-way table.

Q3

(Total 2 marks)

N 3 6 8 0 5 A 0 3 0 4

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Leave blank

4. The table gives information about 60 butterflies in a field.

Type of butterfly	Red Admiral	Peacock	Marbled White
Number of butterflies	24	16	20

David wants to draw a pie chart to represent this information.

Work out the angle he should use for Red Admiral butterflies.

..... °

(Total 2 marks)

Q4

5. The table gives information about the weights of 25 potatoes.

Weight (x grams)	**Frequency**		
$50 < x \leqslant 70$	5		
$70 < x \leqslant 90$	8		
$90 < x \leqslant 110$	10		
$110 < x \leqslant 130$	2		

Work out an estimate for the mean weight.

..... grams

(Total 4 marks)

Q5

TOTAL FOR SECTION A: 15 MARKS

END

N 3 6 8 0 5 A 0 4 0 4

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

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Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Monday 21 June 2010 – Afternoon

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 6 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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Leave blank

SECTION B

Answer ALL SIX questions.

Write your answers in the spaces provided.

You must NOT use a calculator in this section.

You must write down all stages in your working.

1. The table shows information about six cars.

Make of car	Age (years)	Mileage	Colour
Mazda	2	36 000	Red
Ford	2	19 000	Blue
Toyota	3	32 000	Red
Skoda	5	58 000	Green
Renault	6	48 000	White
Nissan	7	10 000	Red

(a) Write down the colour of the Ford car.

.....
(1)

(b) Write down the age of the green car.

..... years
(1)

(c) Write down the age of the red car with the greatest mileage.

..... years
(1)

Q1

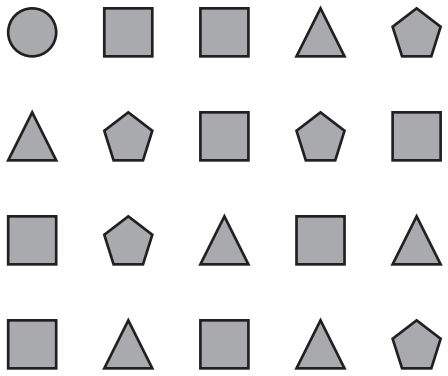
(Total 3 marks)

N 3 6 8 0 6 A 0 2 0 8

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Leave blank

2. Here are 20 shapes.



Complete the frequency table.

Shape	Tally	Frequency
		
		
		
		

Q2

(Total 2 marks)

N 3 6 8 0 6 A 0 3 0 8

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Leave blank

3. A coin can land on a head (H) or it can land on a tail (T).

A dice can land on 1 or 2 or 3 or 4 or 5 or 6

Carmen spins the coin and rolls the dice.

Write down all the possible combinations.
The first one has been done for you.

(H, 1) .....

.....

.....

.....

(Total 2 marks)

Q3

4. The stem and leaf diagram shows information about the heights of 27 buildings.

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

Key: 1 | 2 represents 12 m

(a) Write down the height of the smallest building.

..... m
(1)

(b) Work out the median height.

..... m
(1)

Q4

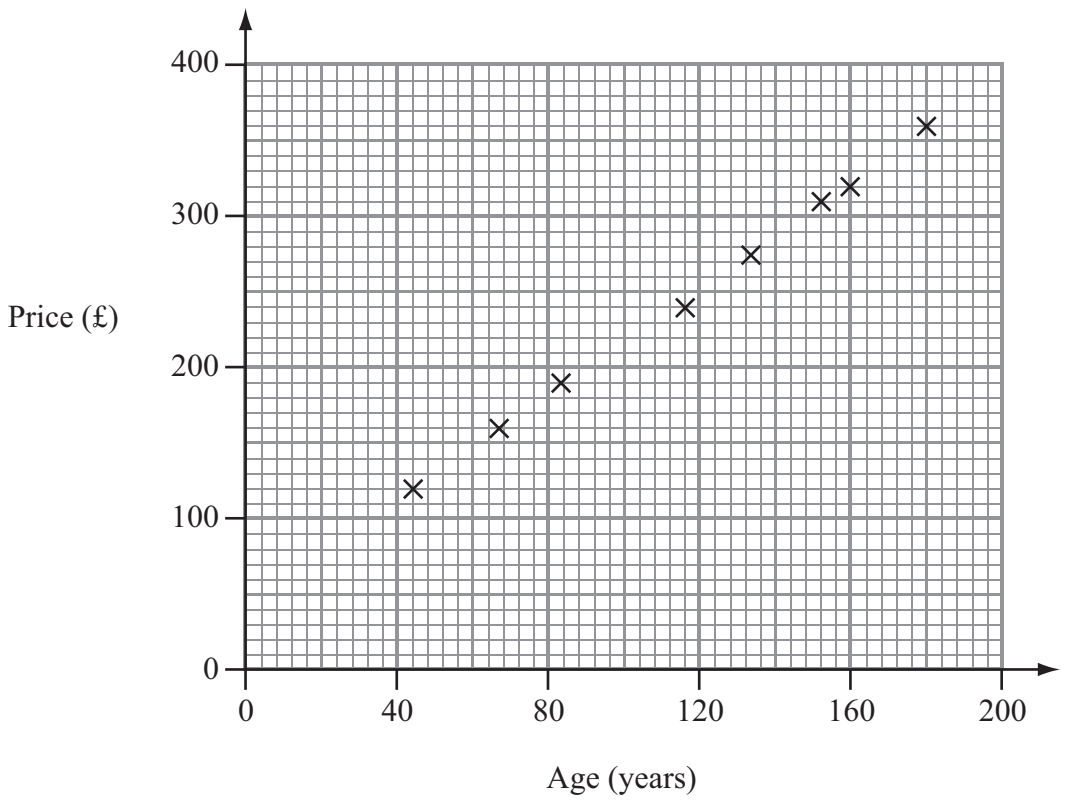
(Total 2 marks)

N 3 6 8 0 6 A 0 4 0 8

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Leave blank

5. A shop sells old maps.
The scatter graph shows information about the prices and ages of eight old maps sold at the shop.



(a) What type of correlation does the scatter graph show?

.....
(1)

Rob wants to buy an old map from this shop.
The map is 100 years old.

(b) Find an estimate for the price of this old map.

£ .....
(1)

(Total 2 marks)

Q5

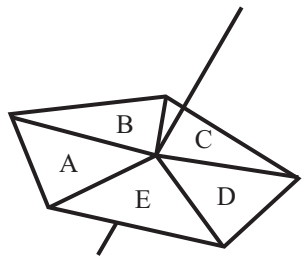
N 3 6 8 0 6 A 0 5 0 8

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Leave blank

6. Here is a five-sided spinner.
The sides of the spinner are labelled A, B, C, D and E.
The spinner is biased.



The table shows the probability that the spinner will land on A or B or C or E.

Letter	A	B	C	D	E
Probability	0.25	0.20	0.10		0.30

(a) Work out the probability that the spinner will land on D.

.....

(2)

Tania is going to spin the spinner 100 times.

(b) Work out an estimate for the number of times the spinner will land on A.

.....

(2) **Q6**

(Total 4 marks)

TOTAL FOR SECTION B: 15 MARKS
TOTAL FOR PAPER: 30 MARKS

END

N 3 6 8 0 6 A 0 6 0 8

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N 3 6 8 0 6 A 0 7 0 8

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Mark Scheme (Results)

Summer 2010

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5A

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Summer 2010

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5381F/5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		12	1	B1 for 12
	(b)		10	1	B1 for 10
	(c)			1	B1 for  oe
2	(a)		6	1	B1 for 6
	(b)	$9-6=$	3	1	B1 for 3
	(c)	$(6+6+6+8+8+9)\div 8=56\div 8$	7	2	M1 for $(6+6+6+6+7+8+8+9)\div 8$ oe A1 cao
3			<table><tr><td></td><td></td><td></td><td>36</td></tr><tr><td></td><td></td><td>14</td><td>34</td></tr><tr><td></td><td>22</td><td>31</td><td></td></tr></table>	2	B2 for all five correct (B1 for any three or four correct)

5381F/5A				
Question	**Working**	**Answer**	**Mark**	**Notes**
4	$\frac{24}{60}\times 360$	144	2	M1 for $24\div 60\times 360$ or 24×6 oe A1 cao
5	$(5\times 60)+(8\times 80)+(10\times 100)+(2\times 120)=$ $300+640+1000+240=2180$ $2180\div 25=87.2$	87.2	4	M1 for $f\times$ consistent part of interval (condone 1 error) M1 for $f\times$ mid interval (allow 1 or 2 arithmetic errors) M1 (dep on first M1) for "2180" $\div 25$ A1 cao

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GCSE

GCSE Mathematics (5381F)
Paper 5B

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)		blue	1	B1 for blue
(b)		5	1	B1 for 5
(c)		2	1	B1 for 2
2		1, 8, 6, 5	2	B2 for all frequencies correct (B1 for any 2 or 3 frequencies or 2 or more tallies correct)
3		***[H,1]***, (H,2), (H,3), (H,4), (H,5), (H,6), (T,1), (T,2), (T,3), (T,4), (T,5), (T,6)	2	B2 for all 12 correct, allow no duplicates or extras (B1 for 7 correct, allow duplicates)
4 (a)		5	1	B1 for 5
(b)		18	1	B1 for 18

5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
5 (a)		positive	1	B1 for positive
(b)		$200-230$	1	B1 for $200-230$ inclusive
6 (a)	$1-(0.25+0.20+0.10+0.30)$	0.15	2	M1 for $1-(0.25+0.20+0.10+0.30)$ or $1-0.85$ or 15 seen A1 for 0.15 oe
(b)	0.25×100	25	2	M1 for 0.25×100 or $100\div4$ oe A1 cao

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Paper Reference(s)

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Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)



Foundation Tier

Unit 1 Test – Data Handling

Tuesday 2 March 2010 – Morning

Time for Section A: 20 minutes

Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 4 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION A

Answer ALL FOUR questions.

Write your answers in the spaces provided.

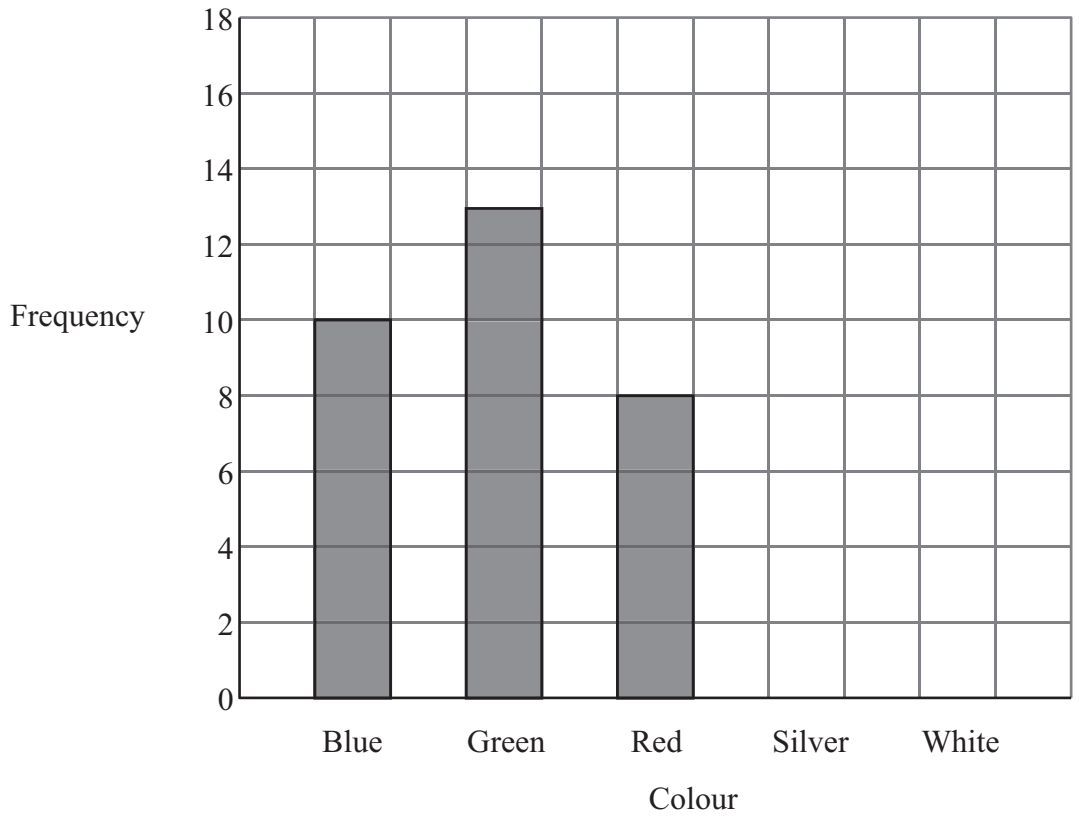
You may use a calculator in this section.

You must write down all stages in your working.

1. The table shows some information about the colours of all the cars in a car park.

Colour	**Frequency**
Blue	10
Green	13
Red	8
Silver	16
White	5

(a) Complete the bar chart.



(2)

N 3 6 4 0 6 A 0 2 0 8

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Leave blank

(b) Which colour of car is the mode?

.....
(1)

(c) Work out the total number of cars in the car park.

.....
(1)

(Total 4 marks)

Q1

2. Here are the weights, in kilograms, of seven parcels.

1.5 2.0 1.1 1.2 2.8 1.6 1.9

Find the median weight.

.....kg
(Total 2 marks)

Q2

N 3 6 4 0 6 A 0 3 0 8

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Leave blank

3. 75 people stayed at a hotel.

This two-way table shows some information about their gender and age group.

	Age group			Total
	5 - 14	**15 - 24**	**25 - 74**	
Male	9			
Female			20	39
Total		26	37	75

(a) Complete the two-way table.

(3)

One of these people is to be picked at random.

(b) Write down the probability that this person will be in the 15 – 24 age group.

.....

(2)

(Total 5 marks)

Q3

N 3 6 4 0 6 A 0 4 0 8

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Leave blank

4. The manager of a supermarket records the waiting times of 50 customers at a checkout.

The table shows information about her results.

Waiting time (t seconds)	**Frequency**		
$0 \leqslant t < 60$	3		
$60 \leqslant t < 120$	7		
$120 \leqslant t < 180$	20		
$180 \leqslant t < 240$	15		
$240 \leqslant t < 300$	5		

Work out an estimate for the mean.

..... seconds **Q4**

(Total 4 marks)

TOTAL FOR SECTION A: 15 MARKS

END

N 3 6 4 0 6 A 0 5 0 8

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N 3 6 4 0 6 A 0 6 0 8

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N 3 6 4 0 6 A 0 7 0 8

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N 3 6 4 0 6 A 0 8 0 8

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Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

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Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Tuesday 2 March 2010 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 6 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
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SECTION B

Answer ALL SIX questions.

Write your answers in the spaces provided.

You must NOT use a calculator in this section.

You must write down all stages in your working.

1. The table shows some information about five countries.

Country	Population (millions)	Land Area (km²)
France	60	544 000
Germany	82	375 000
Italy	58	301 000
Spain	40	505 000
UK	59	244 000

(a) Write down the country with the greatest land area.

.....

(1)

(b) Work out the difference between the highest population and the lowest population.

..... millions

(2)

Q1

(Total 3 marks)

N 3 6 4 0 7 A 0 2 0 8

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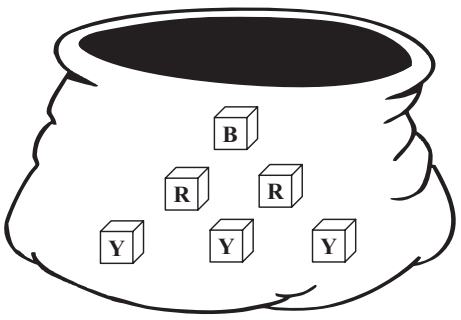
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2. There are six cubes in a bag.

1 cube is blue (B)

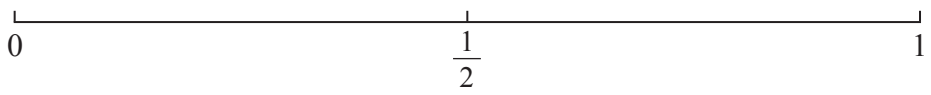
2 cubes are red (R)

3 cubes are yellow (Y)



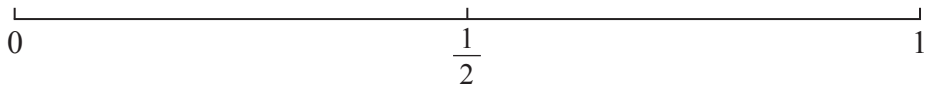
Jakeem is going to take, at random, a cube from the bag.

(a) On the probability scale mark, with a cross (x), the probability that the cube will be yellow.



(1)

(b) On the probability scale mark, with a cross (x), the probability that the cube will be white.



(1)

Q2

(Total 2 marks)

N 3 6 4 0 7 A 0 3 0 8

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Leave blank

3. Kelly is going to have a snack.

She can choose **one** drink and **one** sandwich.

Drinks
Juice
Tea

Sandwiches
Beef
Chicken
Egg
Prawn

One possible combination is (Juice, Beef).

Write down all the possible combinations that Kelly can choose.
The first one has been done for you.

(J, B) .....

.....

Q3

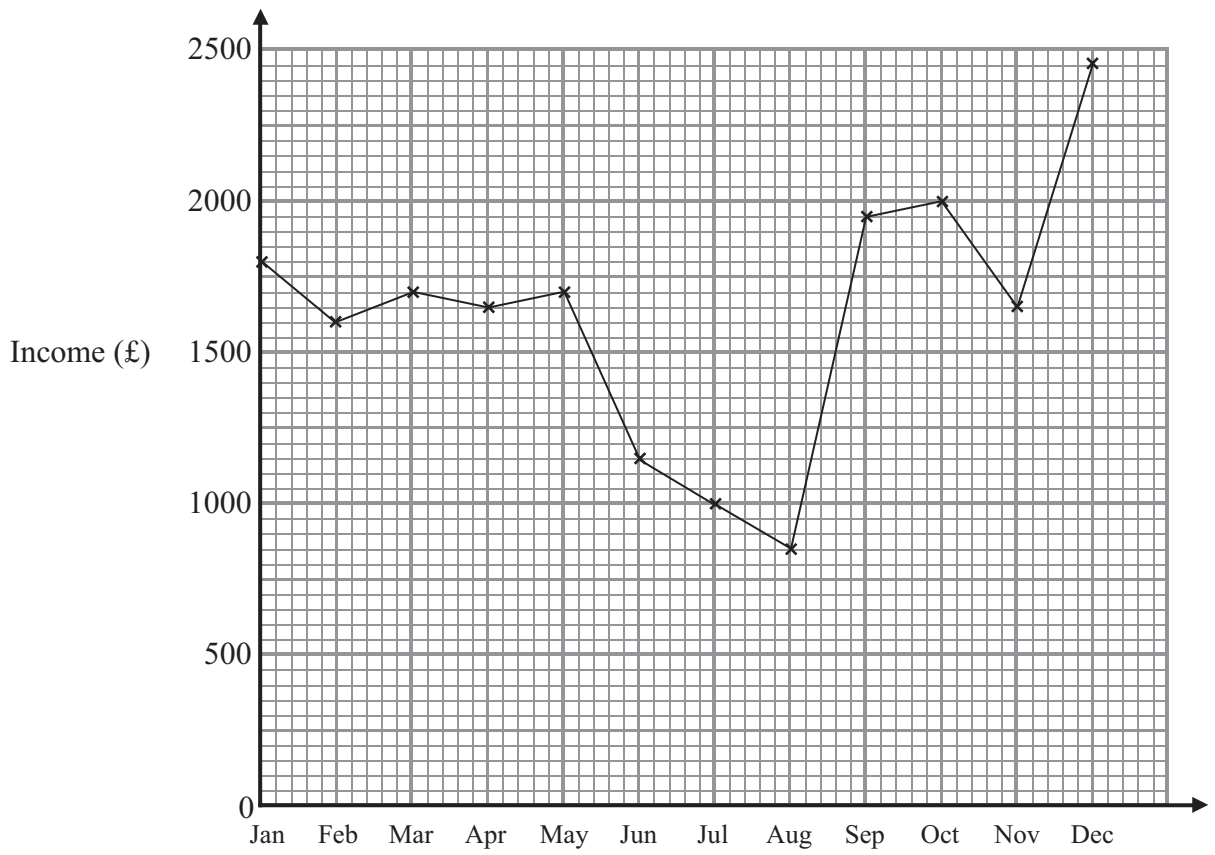
(Total 2 marks)

N 3 6 4 0 7 A 0 4 0 8

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Leave blank

4. The graph shows the income each month of a small business in 2007



(a) Write down the number of months when the income was less than £1500

.....

(1)

One month the income was £1000

(b) Which month?

.....

(1)

Q4

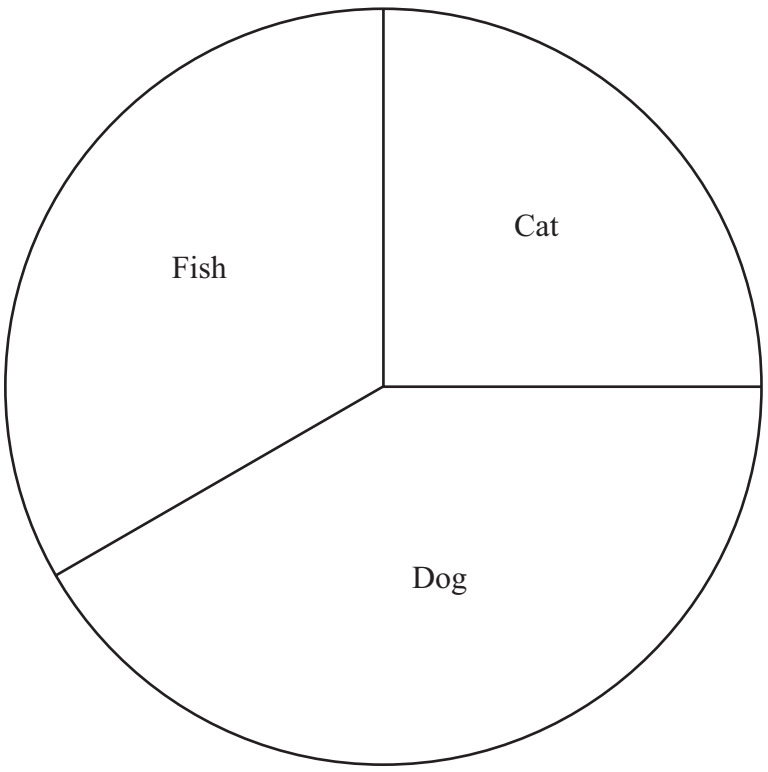
(Total 2 marks)

N 3 6 4 0 7 A 0 5 0 8

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5. This accurate pie chart gives information about the favourite pet of each of 180 students.



Complete the table.

Favourite Pet	Number of Students
Cat	
Dog	
Fish	

Q5

(Total 3 marks)

N 3 6 4 0 7 A 0 6 0 8

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Leave blank

6. Here are the heights, in cm, of 15 female students.

146	176	163	151	158
169	152	167	158	164
170	147	172	155	154

Draw an ordered stem and leaf diagram to show this information.
You must include a key.



Key:

Q6

(Total 3 marks)

TOTAL FOR SECTION B: 15 MARKS

TOTAL FOR PAPER: 30 MARKS

END

N 3 6 4 0 7 A 0 7 0 8

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GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5A

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5381F/5A				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)		Completed bar chart	2	B1 for one correct bar B1 for another correct bar
(b)		Silver	1	B1 silver or ft
(c)		52	1	B1 52 or ft
2	1.1, 1.2, 1.5, 1.6, 1.9, 2.0, 2.8	1.6	2	M1 for ordering or indicating middle number A1 cao (SC B1 for 1.2)
3 (a)		(9) 10 17 36 3 16 (20) (39) 12 (26) (37) (75)	3	B3 for a fully correct table (B2 for 4 or 5 correct entries B1 for 1 or 2 or 3 correct entries)
(b)		$\frac{26}{75}$	2	B2 for $\frac{26}{75}$ oe (B1 for $\frac{26}{x}$, $x > 26$, $x \neq 75$ or for $\frac{x}{75}$, $x < 75$, $x \neq 26$)

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5381F/5A				
Question	**Working**	**Answer**	**Mark**	**Notes**
4	3×30=90 3×29.5=88.5 7×90=630 7×89.5=626.5 20×150=3000 20×149.5=2990 15×210=3150 15×209.5=3142.5 5×270=1350 5×269.5=1347.5 8220 ÷ 50 8195÷50	163.9 – 164.4	4	M1 for use of *fx* with *x* consistent within intervals (including end points). Allow two slips even if outside interval M1 (dep) for use of midpoints. Allow one miscalculation as long as the overall intention is clear. M1 (dep on 1st M1) for use of $\Sigma fx/50$ or $\Sigma fx/\Sigma f$ A1 163.9 – 164.4 NB: do not award the marks for *fx* calculations if they are subsequently replaced by an alternative method, which is used.

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)		France	1	B1 cao
(b)	82 – 40	42	2	M1 for 82 – 40 A1 cao
2 (a)		Cross at ½	1	B1 for cross at ½ (±2mm)
(b)		Cross at 0	1	B1 for cross at 0 (within 2mm)
3		(J,C) (J,E) (J,P) (T,B) (T,C) (T,E) (T,P)	2	B2 for fully correct answer. Ignore duplicates. (B1 for at least 3 additional correct pairings)
4 (a)		3	1	B1 cao
(b)		July	1	B1 cao
5	360 ÷ 180 90 ÷ 2 150 ÷ 2 120 ÷ 2 OR 180 ÷ 4 oe 180 ÷ 3 oe $180 \times \frac{5}{12}$ oe	45 75 60	3	M1 for any correct method shown (see opposite) to find one frequency (can be implied by one correct answer). A1 for two correct entries A1 for fully correct table. NB: award B1 for 45, 75, 60 but not correctly placed.

5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
6		14 | 6 7 15 | 1 2 4 5 8 8 16 | 3 4 7 9 17 | 0 2 6 Key: 14 | 6 means 146	3	M1 for unordered stem and leaf diagram (condone 2 errors, 1 number misplaced counts as 1 error; an omission is 1 error). Note: ignore commas; accept inconsistent/absent spacing A1 for correctly ordered and fully correct diagram B1 for key e.g. 14 | 6 means 146; 14 | 6 = 146; accept 140 | 6 etc if consistent with the table; units not necessary. NB: if 1 | 46 , etc used, mark as above and penalise one mark. If an ordered and unordered diagram are presented mark the ordered.

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Friday 13 November 2009 – Morning

Time for Section A: 20 minutes

Examiner's use only

Team Leader's use only

Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 5 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION A

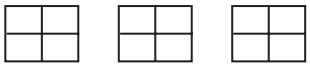
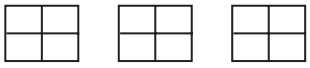
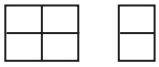
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You may use a calculator in this section.

1. A shop sells boxes of chocolates.
The pictogram shows the numbers of boxes of chocolates sold from January to March.

Month	
January	
February	
March	
April	

Key:  represents 8 boxes of chocolates

(a) Write down the number of boxes of chocolates sold in February.

.....

(1)

(b) Write down the number of boxes of chocolates sold in March.

.....

(1)

The shop sold 10 boxes of chocolates in April.

(c) Complete the pictogram.

(1)

(Total 3 marks)

Q1

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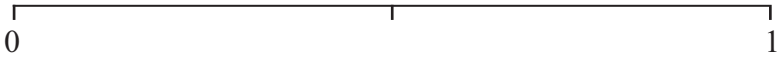
Leave blank

2. (a) On the probability scale below, mark with the letter S, the probability it will snow in London in July next year.



(1)

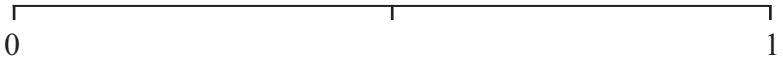
(b) On the probability scale below, mark with the letter F, the probability that at least one game of football will be played in London next year.



(1)

Jenny throws a fair coin once.

(c) On the probability scale below, mark with the letter H, the probability that it will come down Heads.



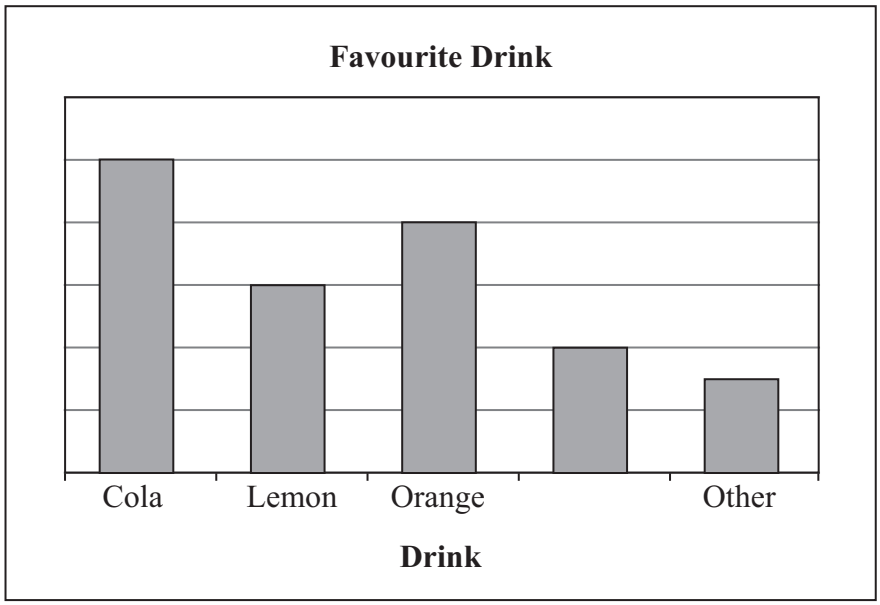
(1) **Q2**

(Total 3 marks)

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Leave blank

3.



Jake has drawn a bar chart to show the favourite drink of each of his friends.

He made some mistakes in the bar chart.

Write down two mistakes that Jake has made.

First mistake .....

.....

Second mistake .....

.....

Q3

(Total 2 marks)

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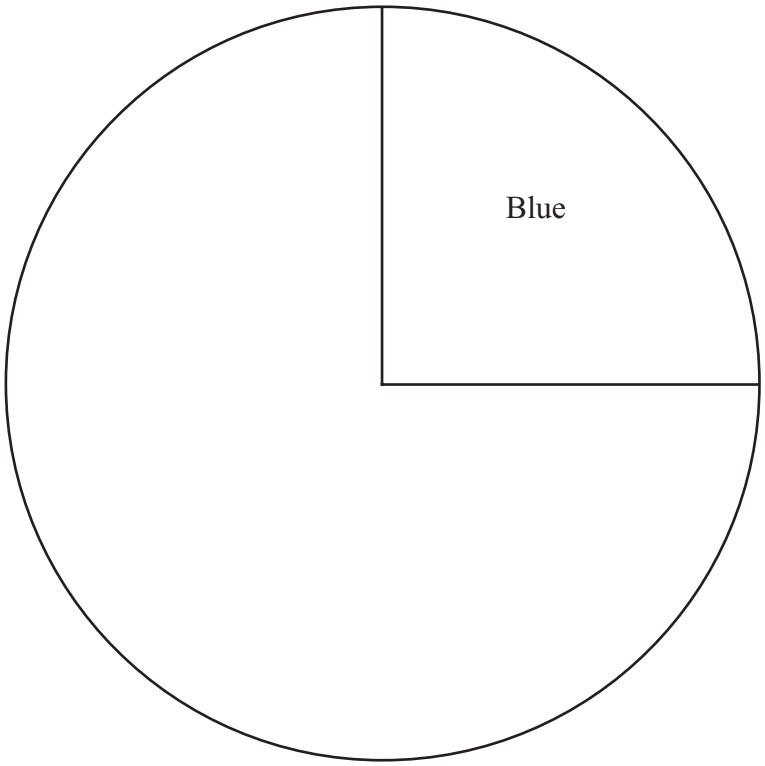
N 3 4 9 7 9 A 0 4 0 8

Leave blank

4. Julie recorded the colour of each of 40 cars.
Information about her results is shown in the table.

Car colour	Frequency
Blue	10
Red	4
Silver	18
Black	6
Green	2

Complete the pie chart accurately to show this information.



Q4

(Total 3 marks)

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Leave blank

5. The table shows some information about the lengths, in minutes, of 40 films.

Time, T, in minutes	Frequency	
$60 \leqslant T < 80$	8	
$80 \leqslant T < 100$	12	
$100 \leqslant T < 120$	6	
$120 \leqslant T < 140$	14	

The lengths of 8 of the films were from 60 to 80 minutes.
560 minutes is a sensible estimate for the total length of these 8 films.

(a) Explain why.

.....

.....

.....

(1)

(b) Calculate an estimate of the mean length of a film.

..... minutes

(3)

Q5

(Total 4 marks)

TOTAL FOR SECTION A: 15 MARKS

END

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N 3 4 9 7 9 A 0 6 0 8

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N 3 4 9 7 9 A 0 8 0 8

Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

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Team Leader's use only

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Friday 13 November 2009 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 6 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION B

Answer ALL SIX questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator in this section.

1. Alice wrote down the numbers of times 30 students were late.
Here are her results.

0	2	1	5	8	7	10	11	12	7
11	12	1	4	7	8	12	16	18	6
7	13	14	18	12	8	10	9	0	4

Complete the table.

Number of times late	Tally	Frequency
0 – 5		
6 – 10		
11 – 15		
16 – 20		

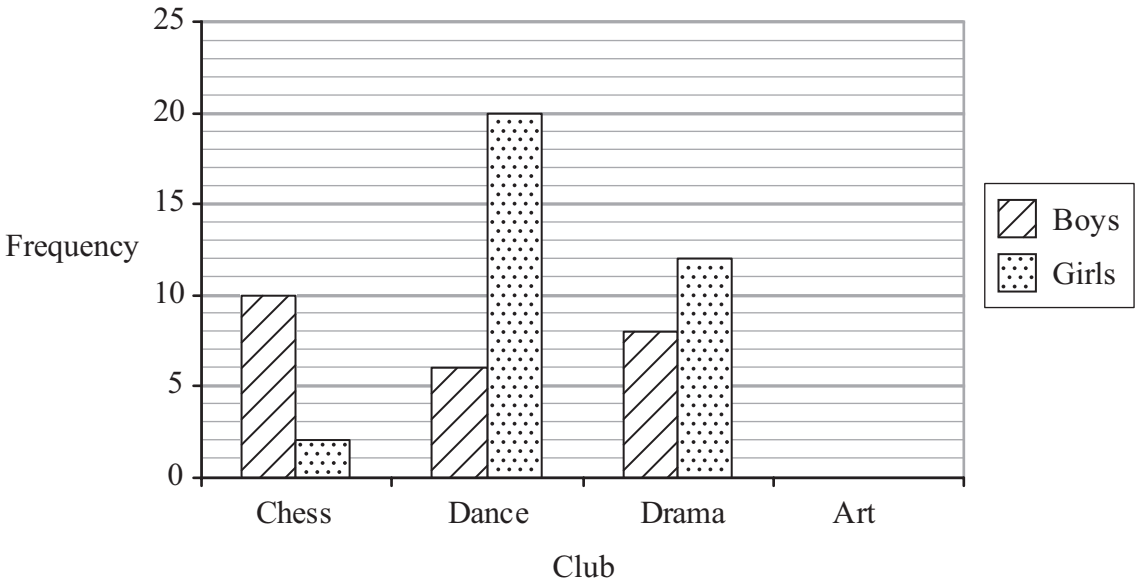
Q1

(Total 3 marks)

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2. The dual bar chart gives some information about the numbers of boys and girls in different clubs in a school.



(a) How many boys were in the Chess club?

.....

(1)

(b) Work out the total number of students in the Dance club.

.....

(1)

There are more girls than boys in the Drama club.

(c) How many more girls?

.....

(1)

There are 18 boys and 14 girls in the Art club.

(d) Complete the dual bar chart.

(1)

Q2

(Total 4 marks)

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3. Here are 8 letters.

Y Y B B R R R G

Kumba takes one of the 8 letters at random.

Write down the probability he takes the letter R.

.....

Q3

(Total 1 mark)

4. Katya wants to find out information about the numbers of men, women, boys and girls using a sports hall.

Design a suitable data collection sheet to collect the information.

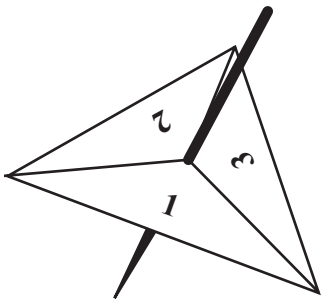
Q4

(Total 2 marks)

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Leave blank

5.



The diagram shows a fair spinner.
The spinner can land on 1 or 2 or 3

Jim spins the spinner twice.

(a) List the possible outcomes.
One of the outcomes has been done for you.

(1,1) .....

(2)

Bronwen spins the spinner twice.

(b) Work out the probability that it lands on 1 and then on 3

.....

(1)

Q5

(Total 3 marks)

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Leave blank

6. 30 students took a test.
The test was marked out of 5

Information about their marks is shown in the table.

Mark	0	1	2	3	4	5
Number of students	0	9	7	3	8	3

(a) Work out the median mark.

.....

(1)

Beccy says "The range of the students' marks is 5".

(b) Is Beccy correct?

.....

You must give a reason for your answer.

.....

(1)

Q6

(Total 2 marks)

TOTAL FOR SECTION B: 15 MARKS

TOTAL FOR PAPER: 30 MARKS

END

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Mark Scheme (Results)

November 2009

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5A

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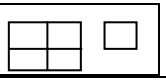
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5381F/5A				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)		24	1	B1 for 24 (accept twenty four)
(b)		12	1	B1 for 12 (accept twelve)
(c)		April 	1	B1 cao
2 (a)		S		B1 for S anywhere between 0 and 0.25 inclusive on the probability scale.
(b)		0 F 1		B1 for F within 1 cm of the end of the scale at 1
(c)		0 1		B1 for H within a tolerance of ± 0.5cm of 0.5 on the scale
		0 H 1		
3		Missing Flavour Missing 'Frequency' Missing scale	2	B1 any one B1 any second one [Note: The corrections may be made on the diagram only – this is acceptable.]
4	40 cars = 360° Blue 90° Red 36° Silver 162° Black 54° Green 18°	Correctly drawn pie chart Fully labelled	3	B3 for a fully correct and labelled chart (tolerance of ± 2° on each angle) [B2 for correct pie chart (± 2° tol) with no or incorrect labels. OR for 2 or 3 accurate sectors (± 2°), NOT including the given 'blue' sector and correctly labelled] [B1 for one extra, accurate and correctly labelled sector OR a for a clear method (e.g 360 ÷40) to find the size of the angles ; this may be implied by the sight of a correct angle in the table]

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5381F/5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
5	(a)	8 × 70 = 560 OR 8 × 60 = 480 and 8 × 80 = 640 and mid-interval found	The mid-interval value 70 multiplied by the frequency 8 gives 560 oe eg. 8 × 70 = 560	1	B1 for correct explanation which explicitly states the 70 and the 8 Accept 8 × 70 (= 560) alone
	(b)	$8\times 70+12\times 90+6\times 110+14\times 130$ = 4120 '4120'÷''40'' =103	103	3	M1 for *fx*, *x* used consistently in the interval (accept the use of the upper limits). Allow 1 slip [This maybe implied by sight of 3 or 4 correct values from 560, 1080, 660 and 1820 Note: If there is no working after this, M1 can still be awarded] M1 (dep) for $\frac{\Sigma f\ ''x''}{''\Sigma f''}$ "Σ*f*" must be seen to be the sum of 8, 12, 6 and 14] A1 cao

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Mark Scheme (Results)

November 2009

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5B

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November 2009

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5381F/5B

Question	Working	Answer	Mark	Notes
1	No / Tally / F 0 - 5 / 𝍸 𝍸 ||| / 8 6 – 10 / 𝍸 𝍸 | / 11 11 –15 / 𝍸 ||| / 8 16 - 20 / ||| / 3		3	B3 for a fully correct table showing all tallies and frequencies. [B2 for 2 or 3 correct tally and related frequency entries OR for 4 correct frequency totals, if tallies omitted, appearing in either column] [B1 for one correct tally or one correct frequency]
2 (a)		10	1	B1 cao
(b)		26	1	B1 cao
(c)		4	1	B1 cao
(d)		Heights 18 (boys) and 14 (girls) correct on diagram	1	B1 for two correct bars (± 0.5 of the line width) If un-shaded/indistinct shading then the 18 must be to the left. Bars can be separated by a space.
3		$\frac{3}{8}$	1	B1 for $\frac{3}{8}$ (accept 0.375, 37.5% but NOT "3 out of 8" or "3 to 8" or "3 in 8 or any other form that is not either a fraction, a decimal or a percentage.)

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<table>
<tr><th colspan="5">5381F/5B</th></tr>
<tr><th>Question</th><th>Working</th><th>Answer</th><th>Mark</th><th>Notes</th></tr>
<tr>
<td>4</td>
<td>
<table>
<tr><td></td><td>Tally</td><td>Frequency</td></tr>
<tr><td>Girls</td><td></td><td></td></tr>
<tr><td>Boys</td><td></td><td></td></tr>
<tr><td>Men</td><td></td><td></td></tr>
<tr><td>Women</td><td></td><td></td></tr>
</table>
</td>
<td>Data collection sheet</td>
<td>2</td>
<td>M1 for a chart quoting all 4 cases (men, women, boys, girls) with spaces in which tally marks or equivalent could be recorded.
[Do not accept - graphs unless it is clear how it is to be used to collect data.
- questions from a questionnaire]
A1 for an indication of tallying (oe), either by example or heading AND a column or indication of frequency (totaling)
Ignore extra information that may be given on the collection sheet.
[SC: B1 for a tally column and a frequency column if M0 scored]
Note: Use of the 3 cases; ‘men’, ‘women’, ‘boys & girls’ is acceptable throughout</td>
</tr>
</table>

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
(5) (a)		**(1, 1)**(1, 2) (1, 3)(2, 1) (2, 2)(2, 3) (3, 1)(3, 2)(3, 3)	2	M1 at least 6 outcomes, including the (1, 1) given. [ignore repeated outcomes] A1 for all 9 correct
(b)		$\frac{1}{9}$ oe	1	B1 for $\frac{1}{9}$ or ft from their list of outcomes in (a) [Accept exact decimals and exact percentages, but not '1 out of 9' or '1 to 9' or '1 in 9', etc
(6) a)		2	1	B1cao
(b)		No, since 5 – 1 = 4 oe	1	B1 'No' + 'correct answer is 4' Or 'there was no-one who gained 0 marks' oe

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

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Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)



Foundation Tier

Unit 1 Test – Data Handling

Thursday 11 June 2009 – Morning

Time for Section A: 20 minutes

Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

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This section has 4 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
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SECTION A

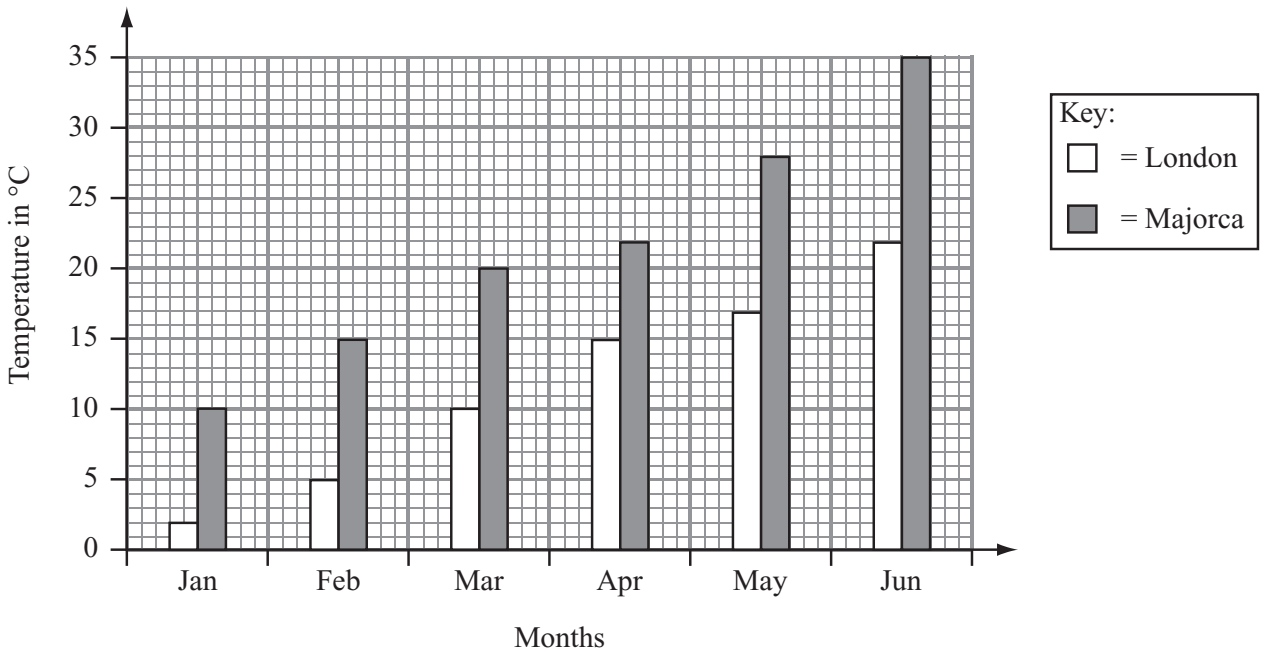
Answer ALL FOUR questions.

Write your answers in the spaces provided.

You may use a calculator in this section.

You must write down all stages in your working.

1. The dual bar chart shows the average monthly temperatures in London and Majorca from January to June one year.



(a) Write down the highest average monthly temperature in Majorca.

..... °C

(1)

(b) Using this dual bar chart, write down **two** facts about the average monthly temperatures in London and Majorca.

1 .....

2 .....

(2)

Q1

(Total 3 marks)

N 3 4 6 9 7 A 0 2 0 8

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Leave blank

2. A rugby team played 7 games.

Here is the number of points they scored in each game.

3 5 8 9 12 12 16

(a) Work out the range.

.....

(2)

(b) Find the median.

.....

(1)

The rugby team played another game.
They scored 11 points.

(c) Find the median number of points scored in these 8 games.

.....

(1)

Q2

(Total 4 marks)

N 3 4 6 9 7 A 0 3 0 8

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3. Michael carried out a survey of some students.
He asked them the type of TV programme they liked best.

The accurate pie chart shows some of this information.



Michael chooses one of the students at random.

(a) (i) Find the probability that this student likes Soaps best.

.....

(ii) Find the probability that this student does **not** like Soaps best.

.....
(2)

6 students said they liked the News best.

(b) How many students took part in the survey?

.....
(2)

(Total 4 marks)

Q3

N 3 4 6 9 7 A 0 4 0 8

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Leave blank

4. Zach has 10 CDs.
The table gives some information about the number of tracks on each CD.

Number of tracks	Frequency	
11	1	
12	3	
13	0	
14	2	
15	4	

(a) Write down the mode.

.....
(1)

(b) Work out the mean.

.....
(3)

Q4

(Total 4 marks)

TOTAL FOR SECTION A: 15 MARKS

END

N 3 4 6 9 7 A 0 5 0 8

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N 3 4 6 9 7 A 0 6 0 8

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N 3 4 6 9 7 A 0 7 0 8

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N 3 4 6 9 7 A 0 8 0 8

Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Thursday 11 June 2009 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 5 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION B

Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must NOT use a calculator in this section.

You must write down all stages in your working.

1. The table shows some information about 4 cars for sale.

Type of car	Number of doors	Number of previous owners	Cost in £
Saloon	4	0	17 200
Coupé	3	2	12 500
Sports	2	3	14 950
Estate	5	2	11 300

(a) How many doors does the Coupé have?

.....

(1)

(b) Which type of car costs less than £12 000?

.....

(1)

Simon picks a car at random.

(c) Write down the probability that Simon will pick a car with exactly two previous owners.

.....

(2)

(Total 4 marks)

Q1

N 3 4 6 9 8 A 0 2 0 8

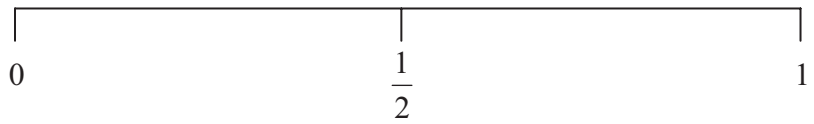
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2. In a box, there are 11 coloured bricks.
5 bricks are red, 2 bricks are blue, 3 bricks are orange and 1 brick is green.

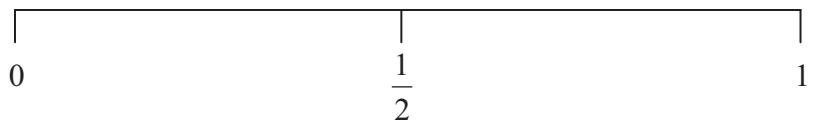
Sally takes one of these bricks at random.

(a) On the probability scale, mark with a letter R, the probability that Sally will take a red brick.



(1)

(b) On the probability scale, mark with a letter W, the probability that Sally will take a white brick.



(1)

Q2

(Total 2 marks)

3. Leah wants to find out which newspapers her friends read.

Design a data collection sheet that she can use to carry out a survey.

Q3

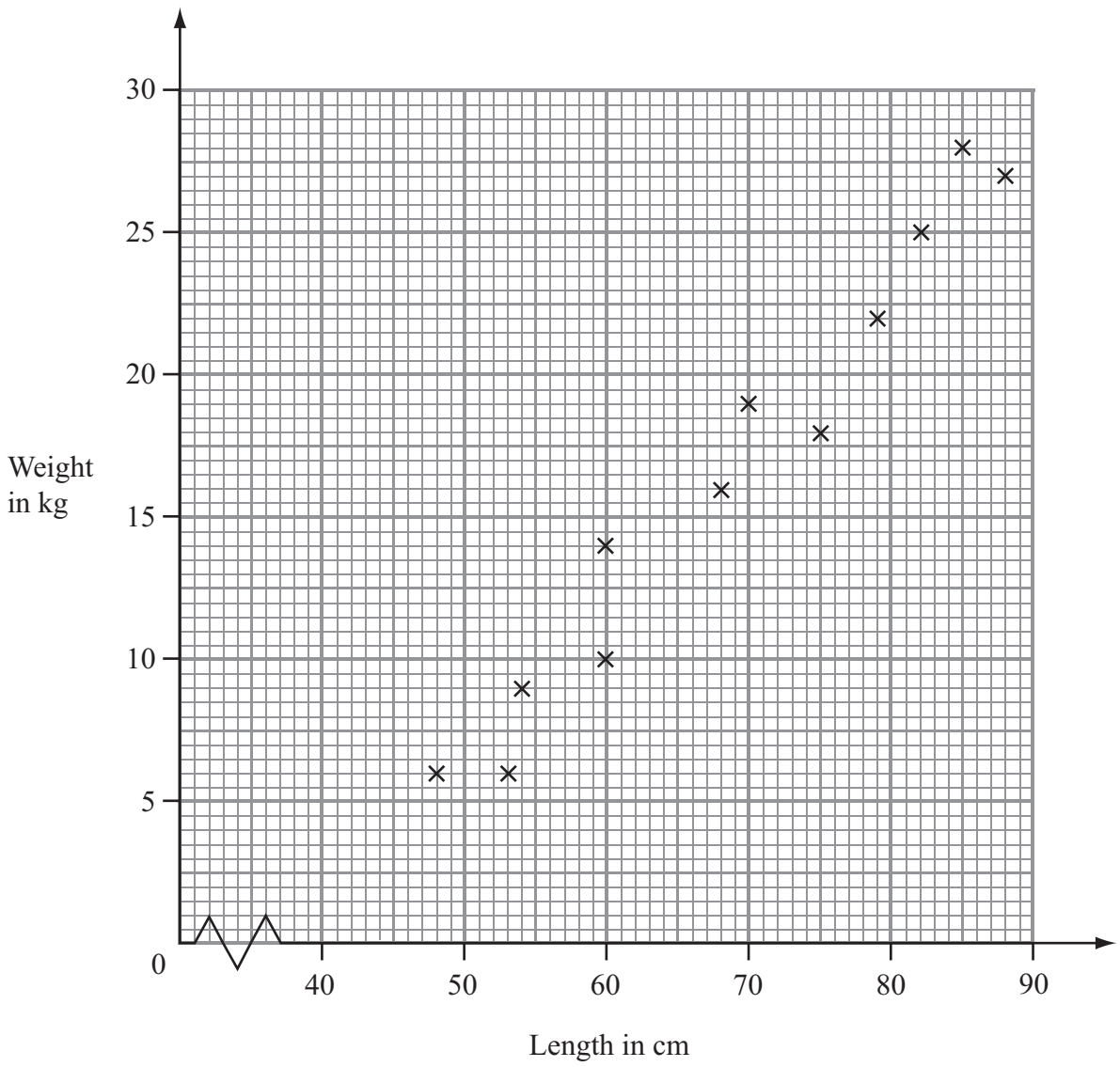
(Total 3 marks)

N 3 4 6 9 8 A 0 3 0 8

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4. Sanji goes fishing for pike.
The scatter graph shows information about the weights and the lengths of some of the pike Sanji caught.



(a) Describe the relationship between the weight and the length of these pike.

.....

(1)

Sanji also caught a pike of weight 24 kg and length 78 cm.

(b) Show this information on the scatter graph.

(1)

N 3 4 6 9 8 A 0 4 0 8

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A pike has a length of 65 cm.

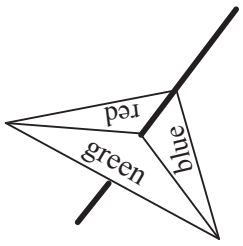
(c) Estimate the weight of this pike.

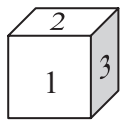
..... kg
(2)

Q4

(Total 4 marks)

5. The diagram shows a 3-sided spinner and an ordinary dice.





The spinner has 1 green side, 1 blue side and 1 red side.

Alex spins the spinner once and rolls the dice once.

Write down all the possible outcomes.
One has already been done for you.

(g, 1) .....

.....

.....

Q5

(Total 2 marks)

TOTAL FOR SECTION B: 15 MARKS

TOTAL FOR PAPER: 30 MARKS

END

N 3 4 6 9 8 A 0 5 0 8

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N 3 4 6 9 8 A 0 6 0 8

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N 3 4 6 9 8 A 0 7 0 8

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N 3 4 6 9 8 A 0 8 0 8

Edexcel GCSE

Mathematics 2381

Summer 2009

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Mark Scheme (Results)

Edexcel GCSE
Mathematics 2381

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5381F/5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
1	(a)		35	1	B1 cao
	(b)		Warmer in Majorca Increase in temperature from Jan to Jun	2	B2 for two acceptable comparisons/observations [B1 for one comparisons/observation]
2	(a)	16 – 3	13	2	M1 for 16 – 3 A1 cao [3 to 16, 3 - 16 oe gets B1 if M0 scored]
	(b)		9	1	B1 cao (take care that this is not the result of an attempt to find the mean)
	(c)		10	1	B1 cao (take care that this is not the result of an attempt to find the mean)
3	(a)(i)		$\frac{90}{360}$ oe	1	B1 for $\frac{90}{360}$ oe (accept 25% or 0.25 or ¼) Condone any incorrect cancelling if correct answer is seen Do not accept 1:4 or 4:1 or 1 out of 4 or 3 in 4 etc
	(ii)		$\frac{270}{360}$ oe	1	B1 for $\frac{270}{360}$ oe (accept 75% or 0.75 or ¾) Condone any incorrect cancelling if correct answer is seen Do not accept 3:4 or 4:3 or 3 out of 4 or 3 in 4 etc SC: B1 for 1 – (a)(i) SC: B0 in (i) and B1 in (ii) for correct answers but consistent writing of probabilities incorrectly in **BOTH** parts (a)(i) **and** (a)(ii) e.g. 1 out of 4 **and** 3 out of 4

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5381F/5A					
Question		**Working**	**Answer**	**Mark**	**Notes**
	(b)	(360 ÷ 30) × 6	72	2	M1 for 360÷30 o.e. e.g.30° is a twelfth or 6÷30 or 30÷6 or 1 person is 5° o.e. or sight of 12×6 or 360 ÷ 5 or attempt add 5 frequencies 3 of which are correct or any partial equivalent method A1 cao
4	(a)		15	1	B1 cao
	(b)	(1 × 11 + 3 × 12 + 0 × 13 + 2 × 14 + 4 × 15) ÷ 10 = 135 ÷ 10 = 11 + 36 + 0 + 28 + 60	13.5	3	M1 for 1 × 11 or 3 × 12 or 0 × 13 or 2 × 14 or 4 × 15 or sight of any two or more of the correct answers 11, 36 , 0, 28, 60 (must be from a product however) M1 (dep) for adding 4 or 5 of these products and dividing by 10 A1 cao [SC: B2 available for using '13 × 0 = 13' without further mistakes] giving an answer of 14.8

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
1 (a)		3	1	B1 cao
(b)		Estate	1	B1 cao
(c)		$\frac{2}{4}$ oe	2	M1 for a fraction with a denominator of 4 or numerator of 2 A1 for $\frac{2}{4}$ oe (accept 0.5 or 50%) SC B1 for 2 out of 4 or 1 out of 2 B0 for 1 : 2 or 2 : 4 or 4 : 2 etc
2 (a)		Between ¼ and ½ but nearer to ½	1	B1 for a mark between ¼ and ½ but nearer to ½ than ¼
(b)		At 0	1	B1 for a clear mark at 0 within ± 2 mm
3		<table><tr><td>Type</td><td>Tally</td><td>Frequency</td></tr><tr><td></td><td></td><td></td></tr></table>	3	B1 for Type of newspaper (or listing examples) B1 for Tally (or tally marks shown) B1 for Frequency (or Total or evidence of totalling)
4 (a)		Positive correlation, or the heavier the pike the longer it is.	1	B1 for positive correlation, or the heavier the pike the longer it is. (or equivalent) B0 for positive (relationship)
(b)		Point plotted correctly	1	B1 for a correct plot ±1 square
(c)		12-17 kg	2	B2 for an answer in the range 12 to 17 kg inclusive **OR** M1 for drawing a line of best fit or vertical line drawn from 65 cm A1 for an answer in the range 12 to 17 kg or ft from "line of best fit"

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5381F/5B				
Question	**Working**	**Answer**	**Mark**	**Notes**
5		(g,1) (g,2) (g,3) (g,4) (g,5) (g,6) (b,1) (b,2)(b,3) (b,4) (b,5) (b,6) (r,1) (r,2) (r,3) (r,4) (r,5) (r,6)	2	B2 for a fully correct list [B1 for at least 6 correct additional outcomes] Ignore duplicates e.g. (g,1) (1, g)

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Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	A	Signature	

Paper Reference(s)

5381F/5A

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Team Leader's use only

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section A (Calculator)



Foundation Tier

Unit 1 Test – Data Handling

Tuesday 3 March 2009 – Morning

Time for Section A: 20 minutes

Section	Leave Blank
A	
B	

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 5 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION A

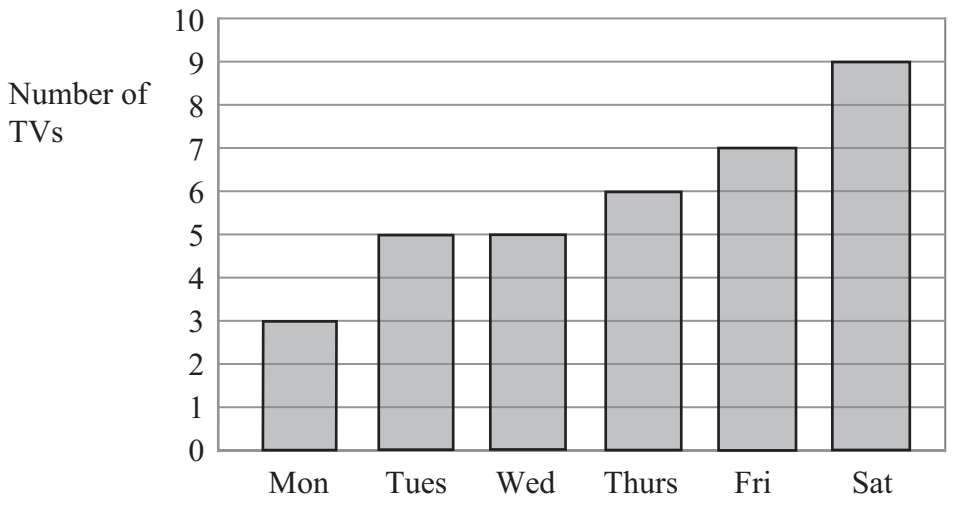
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You may use a calculator in this section.

You must write down all stages in your working.

1. The bar chart shows the number of TVs sold by a shop six days last week.



(a) How many TVs were sold on Friday?

.....

(1)

(b) On which day was the **least** number of TVs sold?

.....

(1)

(c) On which two days were the same number of TVs sold?

..... and .....

(1)

Q1

(Total 3 marks)

N 3 4 6 6 3 A 0 2 0 8

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Leave blank

2. Nick has 6 coins.
Each coin comes from a different country.
Here is some information about these coins.

Coin	Country	Shape	Weight (g)
20 pence	United Kingdom	7-sided	5
500 yen	Japan	circular	7
10 centime	Switzerland	circular	3
1 dollar	Canada	11-sided	7
2 rupee	India	11-sided	6
5 cent	United States	circular	5

(a) Which coin comes from Switzerland?

.....

(1)

(b) Which coin has the same weight as the 500 yen coin?

.....

(1)

Q2

(Total 2 marks)

N 3 4 6 6 3 A 0 3 0 8

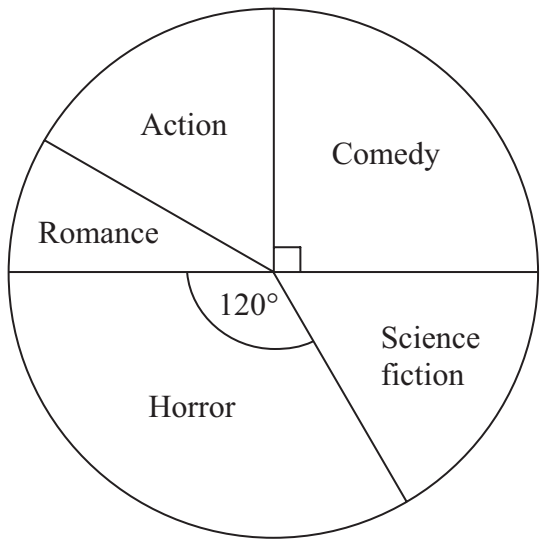
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3. Colin carried out a survey.
He asked some students in Year 10 which type of film they liked best.

He used the results to draw this pie chart.



(a) What fraction of the students said "Comedy"?

.....

(1)

20 students said "Horror".

(b) Work out the total number of students Colin asked.

.....

(2) **Q3**

(Total 3 marks)

N 3 4 6 6 3 A 0 4 0 8

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4. 80 children went on a school trip.
They went to London or to York.

23 boys and 19 girls went to London.
14 boys went to York.

(a) Use this information to complete the two-way table.

	London	**York**	**Total**
Boys			
Girls			
Total			

(3)

One of these 80 children is chosen at random.

(b) What is the probability that this child went to London?

.....

(1)

(Total 4 marks)

Q4

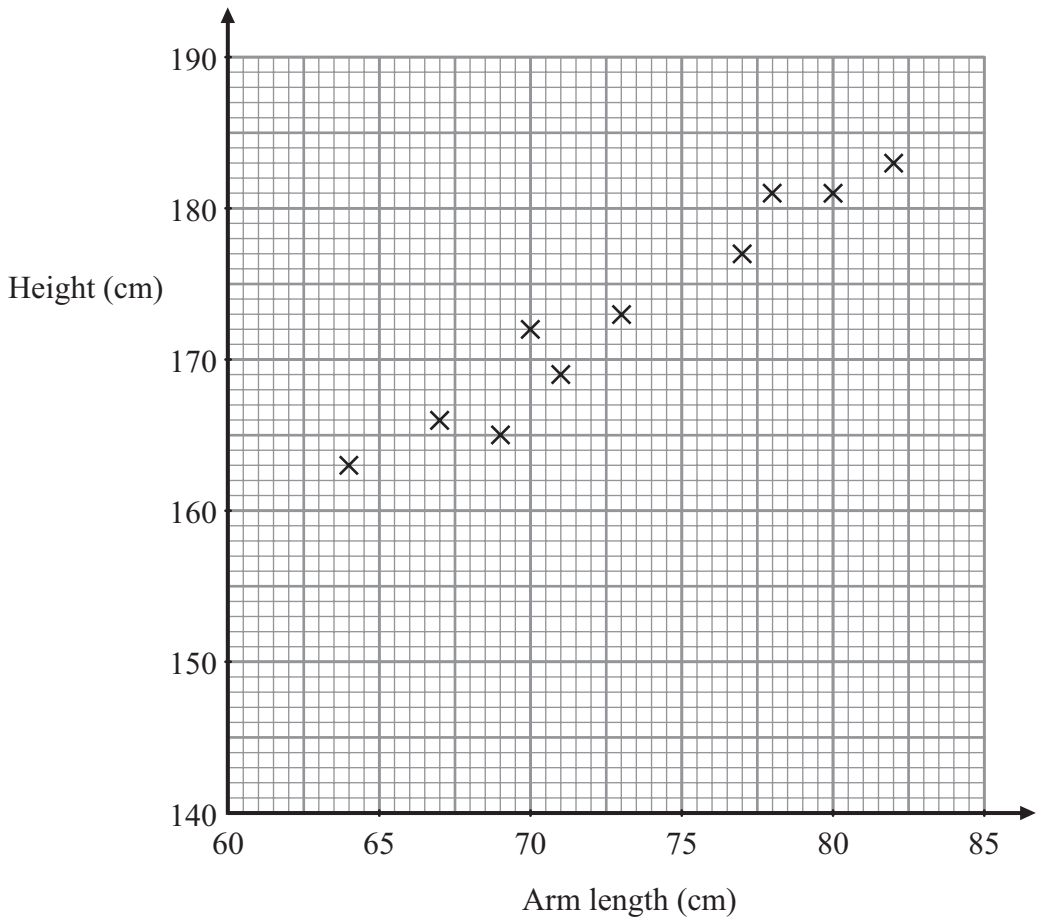
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Leave blank

5. The scatter graph shows some information about 10 students.
It shows the arm length and the height of each student.



(a) What type of correlation does this scatter graph show?

.....
(1)

(b) Draw a line of best fit on the scatter graph.

(1)

Another student has an arm length of 75 cm.

(c) Use your line of best fit to estimate the height of this student.

..... cm
(1)

Q5

(Total 3 marks)

TOTAL FOR SECTION A: 15 MARKS

END

N 3 4 6 6 3 A 0 6 0 8

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N 3 4 6 6 3 A 0 7 0 8

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N 3 4 6 6 3 A 0 8 0 8

Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	3	8	1	F	/	5	B	Signature	

Paper Reference(s)

5381F/5B

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics (Modular) – 2381

Paper 5 – Section B (Non-Calculator)

Foundation Tier



Unit 1 Test – Data Handling

Tuesday 3 March 2009 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 5 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION B

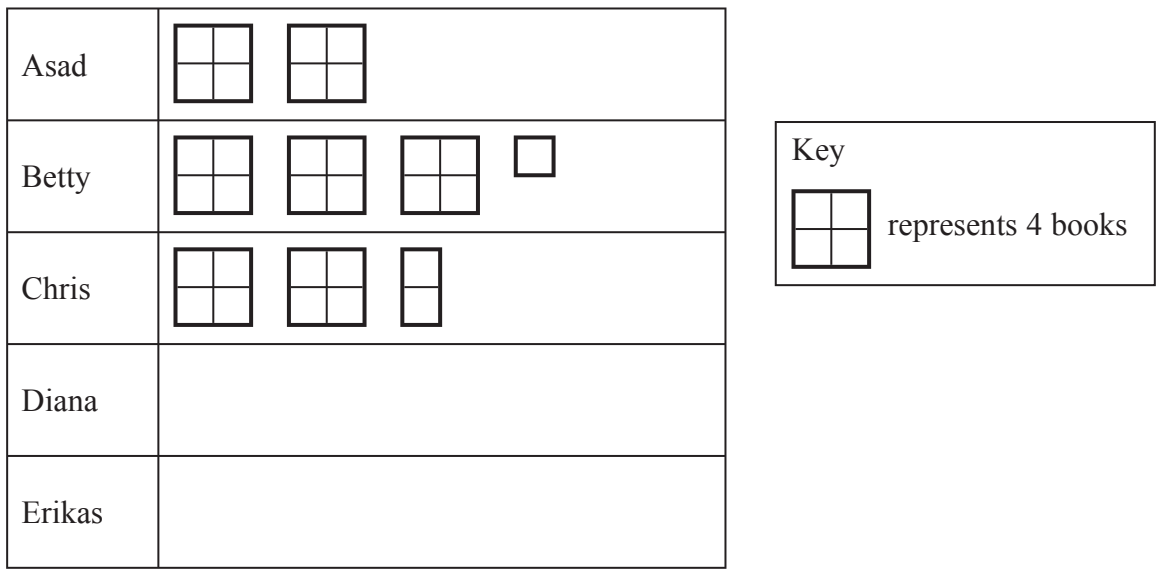
Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must NOT use a calculator in this section.

You must write down all stages in your working.

1. Here is a pictogram.
It shows the number of books read by Asad, by Betty, and by Chris.



(a) Write down the number of books read by

(i) Asad,

.....

(ii) Chris.

.....

(2)

Diana read 12 books.
Erikas read 9 books.

(b) Show this information on the pictogram.

(2)

(Total 4 marks)

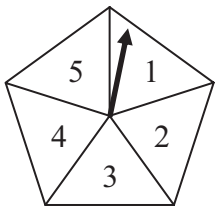
Q1

N 3 4 6 6 4 A 0 2 0 8

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Leave blank

2. Ishah spins a fair 5-sided spinner.
She then throws a fair coin.





(a) List all the possible outcomes she could get.
The first one has been done for you.

(1, head) .....

.....

(2)

Ishah spins the spinner once and throws the coin once.

(b) Work out the probability that she will get a 1 and a head.

.....

(1) **Q2**

(Total 3 marks)

3. Zoe recorded the weight of each of 15 people.
She showed her results in a stem and leaf diagram.

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

Key:

4|6 means 46 kg

(a) Write down the number of people with a weight of more than 70 kg.

.....

(1)

(b) Work out the range of the weights.

..... kg

(2) **Q3**

(Total 3 marks)

Turn over

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Leave blank

4. James wants to find out how many text messages people send.

He uses this question on a questionnaire.

"How many text messages do you send?"

☐ 1 to 10 ☐ 11 to 20 ☐ 21 to 30 ☐ more than 30

(a) Write down **two** things wrong with this question.

1 .....

.....

2 .....

.....

(2)

James asks 10 students in his class to complete his questionnaire.

(b) Give **one** reason why this may not be a suitable sample.

.....

.....

(1)

Q4

(Total 3 marks)

N 3 4 6 6 4 A 0 4 0 8

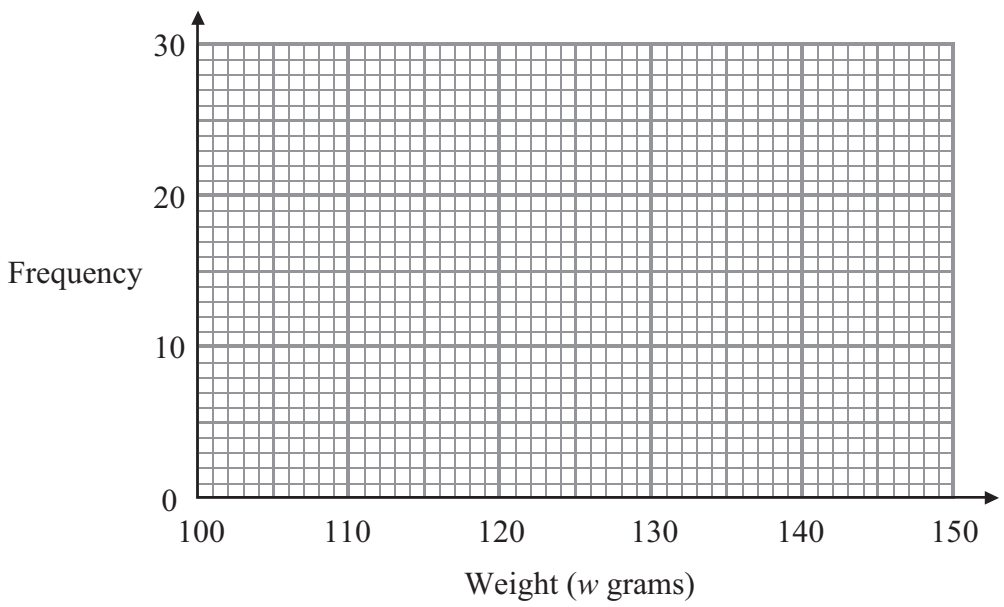
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5. The table shows some information about the weights (w grams) of 60 apples.

Weight (w grams)	**Frequency**
$100 \leqslant w < 110$	5
$110 \leqslant w < 120$	9
$120 \leqslant w < 130$	14
$130 \leqslant w < 140$	24
$140 \leqslant w < 150$	8

Draw a frequency polygon to show this information.



Q5

(Total 2 marks)

TOTAL FOR SECTION B: 15 MARKS

TOTAL FOR PAPER: 30 MARKS

END

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Mathematics 2381

March 2009

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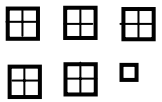
Mark Scheme (Results)

Edexcel GCSE
Mathematics 2381

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5381F/05 - Section A					
Question		Working	Answer	Mark	Notes
1	(a)		7	1	B1 cao
	(b)		Monday	1	B1 cao accept abbreviations
	(c)		Tuesday and Wednesday	1	B1 cao accept abbreviations (not T)
2	(a)		10 centime	1	B1 for 10 centime or centime
	(b)		1 dollar	1	B1 for 1 dollar or dollar
3	(a)		$\frac{1}{4}$	1	B1 for $\frac{1}{4}$ or equivalent fraction
	(b)	20×3	60	2	M1 for $360 \div 120$ or 3 seen or $360 \div (120 \div 20)$ or three of 20,10,10,15,5 seen either on the diagram or seen in a sum of 4 or 5 numbers A1 ca
4	(a)		**23** **14** 37 **19** 24 43 42 38 **80**	3	B3 for all correct (B2 for 5, 6, 7 or 8 correct) (B1 for any 2 of the 4 given correctly placed)
	(b)		$\frac{42}{80}$	1	B1 for $\frac{"42"}{"80"}$ oe
5	(a)		Positive	1	B1 cao (Accept +ve)
	(b)		Line of best fit	1	B1 for a straight line passing between (65, 160) and (65, 166) and between (80, 178) and (80, 184)
	(c)		173 – 176	1	B1 for 173 – 176 or ft from a single line segment with positive gradient $\pm$ 1 full (2mm) square

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5381F/05-Section B					
Question		Working	Answer	Mark	Notes
1	(a)(i)		8	1	B1 cao
	(ii)		10	1	B1 cao
	(b)			2	B1 cao B1 cao
2	(a)	(1,H), (2,H), (3,H), (4,H), (5,H), (1,T), (2,T), (3,T), (4,T), (5,T)		2	B2 for listing 10 outcomes with no extras (B1 for listing 4 additional outcomes, ignore repeats or extras)
	(b)		$\frac{1}{10}$	1	B1ft for $\frac{1}{10}$ o.e. or 1/their total Accept decimals or percentages
3	(a)		5	1	B1 cao
	(b)	87 - 46	41	2	M1 for 87 – 46, (accept 46 to 87 and 46 – 87) A1 cao

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5381F/05 - Section B					
Question		Working	Answer	Mark	Notes
4	(a)		No time period No response box for 0 Need smaller class intervals	2	B2 for 2 of the 3 reasons (B1 for 1 reason)
	(b)		Comment on sample	1	B1 for sample too small or all same age group or same gender
5			Points plotted at (105,5), (115,9), (125,14), (135,24), (145,8) and joined with line segments	2	B2 cao for plotting correct points ± 1 sq and joining with line segments (B1 for points plotted correctly at midpoints of intervals or joining points with line segments at the correct heights and consistent within the class interval (including end values) or correct frequency polygon with one point incorrect) or correct frequency polygon with first and last point joined NB Ignore any histogram drawn and any part of frequency polygon outside range of first and last points plotted

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