

# Examiners' Report March 2010

GCSE

GCSE Mathematics (2381)

Foundation Paper (5381F/05)

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## 1. PRINCIPAL EXAMINER'S REPORT - FOUNDATION PAPER 5

### 1.1. GENERAL COMMENTS

- 1.1.1. A significant weakness running through some questions relates to poor numerical skills, which indicated the absence of a calculator, particularly on section A.
- 1.1.2. There were several occasions in this paper where candidates had simply misread the question. This was most evident in question A1, A2, B1 and B4. Candidates are advised to ensure they understand what the question is asking them to do.

### 1.2. Report on Individual Questions (Section A)

#### 1.2.1. Question 1

This question was well answered. In most cases candidates presented accurate bars on the grid, though in a few cases the bar for White was drawn at 7 rather than at 5. In part (b) there were few occasions when candidates chose the wrong colour, with Blue the most common incorrect answer. In part (c) all candidates understood what needed to be done, but poor arithmetic led to incorrect answers, perhaps suggesting the absence of a calculator.

#### 1.2.2. Question 2

It was clear that a significant minority of the candidates did not fully understand the word "median", and instead calculated the mean. Of those who realised that the "middle number" was important there were many who stated "1.2" without ordering the list.

#### 1.2.3. Question 3

This was a well answered question. There was some evidence of poor arithmetic leading to incorrect answers in part (a), but many demonstrated a good understanding of 2-way tables. Part (b) was also well answered, though a minority lost a mark through writing their probability using incorrect notation.

#### 1.2.4. Question 4

This question proved a trial for most. There was much confusion as to what process has to be followed to find the solution, with attempts at cumulative frequency, finding the mean of the frequency values, or indeed the class interval boundaries. Choice of midpoint values varied from the actual midpoints to the top ends, or an inconsistent mixture of numbers. A significant minority chose to use 60 as a constant multiplier. Even though candidates were told there were 50 customers, the numbers used for the division also varied, from incorrect summation of the frequencies, to the common use of 5 as a divisor. As a result of the many errors there were few who arrived at the correct answer.

### 1.3. Report on Individual Questions (Section B)

#### 1.3.1. Question 1

Throughout this question candidates failed to properly read the question. For example, in part (a) the question referred to land area, yet many candidates focussed instead on population, and the reverse was the case in part (b). In part (a) it was also the case that too many stated the greatest land area, whereas they had been asked to name the country.

#### 1.3.2. Question 2

Part (b) was well answered, with many candidates placing their cross at or near to the 0. Part (a) was less well answered. It was clear that many had difficulty in equating the numerical figures to the fraction  $\frac{1}{2}$  and as a result crosses were placed almost randomly across the number line.

#### 1.3.3. Question 3

This was a well-answered question. The only common error was when candidates left out one or more of the combinations, or only considered Juice (without considering Tea). Most benefited from well ordered combinations.

#### 1.3.4. Question 4

There was much evidence of misreading in this question. Most candidates understood which part of the graph to look at for their answers. In part (a) too many stated the months, rather than writing down the number of months (3). Part (b) was better answered, though some were influenced by the fact that the first point they came to that was near to £1000 was June, and stated this instead of July.

#### 1.3.5. Question 5

This question was a challenge to many, who were perhaps too used to having to draw pie charts, rather than extract information from them. In many cases it was clear that answers were mere guesses in rough proportions to the sectors in the pie chart, and did not always sum to 180. One might have expected that at least the  $90^\circ$  sector would have been considered to be  $\frac{1}{4}$  of 180, but this relationship was not evident to many.

#### 1.3.6. Question 6

Most candidates had a good understanding of what was needed, though execution was not always precise. Most attempted to order the numbers, but a significant minority did not. There was some confusion over the number to choose for the stem, and some carelessness shown

when even better candidates left numbers out. Students should be advised to do a quick number count once their answer is complete, to ensure they have the correct number of items in the diagram. Also, too many candidates gave a key that was not in the correct format, losing them a mark.

## 2. STATISTICS

### 2.1. MARK RANGES AND AWARD OF GRADE

Unit/Component	Maximum Mark (Raw)	Mean Mark	Standard Deviation	% Contribution to Award
5381F/05	30	18.6	5.3	20
5381H/06	30	17.3	6.7	20
5382F/07	25	14.6	4.2	15
5382H/08	25	13.9	5.0	15
5383F/09	25	13.1	5.4	15
5383H/10	25	13.9	5.4	15

### 2.2. GRADE BOUNDARIES

The table below gives the lowest raw marks for the award of the stated uniform marks (UMS).

#### Unit 1 - 5381

	A*	A	B	C	D	E	F	G
UMS (max: 55)				48	40	32	24	16
Paper 5381F				24	20	16	13	10
UMS (max: 80)	72	64	56	48	40	36		
Paper 5381H	28	23	16	10	7	5		

#### Unit 2 Stage 1 - 5382

	A*	A	B	C	D	E	F	G
UMS (max: 41 )				36	30	24	18	12
Paper 5382F				19	16	13	10	7
UMS (max: 60 )	54	48	42	36	30	27		
Paper 5382H	23	19	14	10	8	7		

Unit 2 Stage 2 - 5383

	A*	A	B	C	D	E	F	G
UMS (max: 41 )				36	30	24	18	12
Paper 5383F				20	15	11	7	3
UMS (max: 60 )	54	48	42	36	30	27		
Paper 5383H	23	19	14	10	7	5		

2.3. UMS BOUNDARIES

Maximum Uniform mark	A*	A	B	C	D	E	F	G
400	360	320	280	240	200	160	120	80

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