

# Principal Examiner Feedback

March 2011

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 The paper proved to be accessible to most candidates with the majority of the candidates attempting all questions.

1.1.2 Candidates appeared to be able to complete the paper in the allotted time.

1.1.3 The level of numeracy was disappointing. This was particularly evident in questions B4b and B6

## 1.2 REPORT ON INDIVIDUAL QUESTIONS

### 1.2.1 Question A1

Part (a) was answered extremely well. Candidates found part (b) slightly more demanding with 70 being a common incorrect answer.

### 1.2.2 Question A2

The majority of candidates answered both parts of this question correctly.

### 1.2.3 Question A3

When extracting information from tables, candidates need to ensure that they meet all conditions given in the question. In this question part (a) was generally answered correctly although some candidates just gave Adams or Singh rather than both families. In part (b) a significant number of candidates failed to read all the given criteria and gave the incorrect answer of Hale having failed to realise that the family in question stayed at a hotel.

### 1.2.4 Question A4

The vast majority of candidates had some idea about listing outcomes, and most of them got all 8 pairs correct. Most of the lists were systematic and written in a logical order. Most of the candidates who wrote duplicate pairs did so by rewriting all 8 combinations again but with the order reversed. However, some candidates simply listed the options from box A and then the options from box B separately not appreciating that they should be giving the combinations that covered one counter from each box. Part (b)

was done very poorly, the most common answer given was  $\frac{2}{6}$  (or  $\frac{1}{3}$ ) which

candidates obtained by attempting to add  $\frac{1}{2}$  and  $\frac{1}{4}$ , the probability of getting a white counter from box A and a red counter from box B. Other incorrect responses for part (b) included giving the two fractions  $\frac{1}{2}$  and  $\frac{1}{4}$

and the use of words such as 'unlikely'. Of those candidates that did give the correct answer of  $\frac{1}{8}$  a significant number of candidates failed to use

correct notation and write the answer as, for example, '1 out of 8' or '1 : 8' which failed to gain the mark.

- 1.2.5 Question A5**  
Drawing pie charts is clearly not understood by the majority of candidates at this level; about 70% of candidates failed to gain a mark in this question. The modal answer was to attempt to use the frequencies for the angles. Accurate pie charts were seen but from a small minority of candidates. Some were not accurate enough in the calculation of their angles, having evaluated  $360 \div 540$  this was then prematurely early rounded to 0.6 or 0.7 which resulted in the angles being inaccurate. In this instance, if the method was clearly visible then candidates were able to gain a mark.
- 1.2.6 Question A6**  
It was pleasing to see a significant number of correct answers for the mean from a grouped frequency table although it was still the case that just over 70% of candidates were unable to gain to any marks. The most common incorrect methods were either to sum the frequencies and divide by 5 (giving an answer of 10) or to sum the midpoint values and divide by 5 (giving an answer of 175). Of those candidates who appreciated the need to multiply the midpoint values by the frequencies, some were inconsistent in choosing their 'mid-point' value and others, having carried out the multiplication then divided by 5 instead of 50.
- 1.2.7 Question B1**  
The frequency table was generally completed correctly. The majority of candidates were able to give a good explanation in part (b) either by explaining that Mirror was the mode or explaining that the Telegraph was not the most popular. A minority of candidates got confused between mode, median and mean.
- 1.2.8 Question B2**  
The vast majority of candidates were able to demonstrate that they knew that the median meant the middle height. Most of these did order the heights before they found the median but a number did find the middle height of the unordered data. Candidates that rewrote the heights in order were more likely to be successful in finding the median correctly than those who worked directly from the table.
- 1.2.9 Question B3**  
Candidates performed well in this question. Common errors included omitting the shading and failing to label either just one or all of the pairs of bars.
- 1.2.10 Question B4**  
A common incorrect answer for part (a) was 5 coming from candidates just counting the number of rows. The level of numeracy in part (b) was very disappointing. The correct method of  $73 - 40$  was frequently seen followed by the incorrect answer of 37 or 47 or 53.

### 1.2.11 Question B5

Candidates were generally successful in describing the relationship between the two variables although many did struggle with the language and the context of this question. Those attempting to describe the correlation were generally successful although 'positive correlation' was seen and 'negative' by itself without the addition of 'correlation' was insufficient to gain a mark. Some candidates lost a mark in part (b) by failing to read the scale on the temperature axis correctly following a line of best fit drawn, frequently giving an answer of 13 rather than 11.5

### 1.2.12 Question B6

It was pleasing to see this, the final question in the paper answered so well with just under 50% of candidates gaining full marks. Most candidates appreciated the fact that the sum of the probabilities would be one. However, once again, poor numeracy skills meant that candidates had problems either with adding 0.45 and 0.25 or else with subtracting these value from one. Some candidates also forgot that the answer would be a decimal and left the answer as 15 rather than 0.15

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