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Principal Examiner Feedback

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GCSE Mathematics (5381F)
Paper 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 with the majority of the candidates attempting all the questions.

1.1.2. It was pleasing that many candidates showed working out. Some candidates, though, gave incorrect answers without working which meant that no marks could be awarded. This was particularly noticeable in the three parts of question A3.

1.2. REPORT ON INDIVIDUAL QUESTIONS

1.2.1. Question A1

The majority of candidates completed the frequency table correctly in part (a). A few tallies were inaccurate and a few candidates did not complete the frequency column.

Almost all of the candidates scored full marks for their bar chart in part (b). Most left consistent gaps, or no gaps, between bars.

In part (c), the mode was well understood although a small number of candidates gave the answer as 8 rather than silver. Some gave the mode as 5, presumably because 5 appeared twice in the frequency column.

1.2.2. Question A2

It was pleasing that most candidates wrote down a probability using numbers with few using words such as 'unlikely'. Many gave the correct answer. The most common incorrect answer was 1/3. Some candidates wrote the probability using incorrect notation, giving answers such as 1 out of 4 and 1 : 4. These gained no credit.

1.2.3. Question A3

In part (a) the vast majority of candidates showed that they knew that the median meant the middle score. Many candidates ordered the numbers but many had difficulty with the next step. Some did try to find the mean of 25 and 36 with 30 and 31 being common wrong answers. Other common mistakes, after ordering, included selecting either 25 or 36; giving both 25 and 26; and subtracting 25 from 26. Those candidates who did not order the numbers often gave 35 as their answer or just selected either 25 or 45.

In part (b) the majority of candidates knew to sum the values and many then divided by 8. Keying into a calculator sometimes resulted in only the final value being divided by 8. Some candidates summed the values but did not divide by 8. Other errors included finding the sum of only seven of the values or getting an incorrect total for all 8. Some candidates showed 31.5 in their working and then rounded to 31 or 32.

Those who showed no working and gave an answer of 31 or 32 could be awarded no marks.

Very few candidates were successful in part (c). Many responses showed no working and had a single digit number on the answer line. Some candidates obtained 288 but then divided by 2, by 8, by 10 or by 32. Some divided 252 by 9 and some added 32 to 252 and then divided by 9. A few candidates successfully obtained 36 by trial and improvement.

1.2.4. Question A4

Part (a) was answered very poorly. The most common incorrect answers were 6 (the median of the five frequencies), $30 < t \leq 40$ (the class interval with a frequency of 6) and $20 < t \leq 30$ (the middle class interval). Many answers were single digits rather than class intervals.

In part (b) candidates who plotted 5 points usually did so at the correct frequencies. Many, however, plotted at the ends of the intervals rather than at the midpoints. Points were frequently not joined but when they were it was usually with straight lines. It was very common to see the points joined in an incorrect order with the lines forming a polygon. A few candidates attempted to draw a line of best fit. When no points were plotted the most common response was for bars to be drawn

1.2.5. Question B1

Both part (a) and part (b) were answered extremely well. In part (b) a small number of candidates did not identify the day and gave an answer of '30' or '30 minutes'.

Part (c) was well attempted and most candidates did show some working out. Many candidates gave the correct answer. Some incorrect answers resulted from candidates reading one of the values incorrectly from the bar chart or from making an arithmetical error. Some candidates did not read the question properly and only worked with Helen's times or with Robin's times. Some worked out the difference for the whole week, not just for Friday and Saturday

1.2.6. Question B2

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

1.2.7. Question B3

The two-way table in part (a) was generally completed very well with many candidates giving all seven correct values. Hardly any candidates at all failed to give at least one correct value.

Part (b) was answered less well. The number '20' featured in the majority of answers but many candidates gave the probability as 20/40 or 20/50 instead of 20/100. Some wrote just '20' on the answer line.

1.2.8. Question B4

The vast majority of candidates had some idea about listing outcomes and most wrote down all 12 possible outcomes. Most of the lists were systematic and written in a logical order. Some candidates wrote all 12 combinations again but with the order reversed. Errors included listing only the 4 outcomes with red on the 3-sided spinner and listing outcomes consisting of pairs of numbers (presumably from spinning the 4-sided spinner twice).

1.2.9. Question B5

This question was very well attempted with the majority of candidates writing down two things that they thought were wrong with the question. Many candidates were able to give at least one valid thing wrong. Not having a box for zero and the vagueness of the response boxes were identified most often. The lack of a time period was also recognised by many candidates. Common incorrect responses included stating that Nathalie should have asked about the *type* of music and that she should have drawn a tally chart. Some candidates wrote that she was only asking her friends

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