

Principal Examiner Feedback

Summer 2015

Pearson Edexcel GCSE
In Mathematics B (2MB01)
Foundation (Calculator) Unit 1

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Publications Code UG042105

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GCSE Mathematics 2MB01

Principal Examiner Feedback – Foundation Paper Unit 1

Introduction

Though many students showed their working there were still far too many cases when it was missing and caused many students to lose marks.

Almost all students had the necessary equipment which was gratifying to see.

Report on individual questions

Question 1

This question was very well understood. Almost all students scored full marks for interpreting and reading information from a table.

Question 2

This question on representing information in a graphical form was also well answered with fully correct answers given for parts (a) and (c) by almost all students. In part (b), a score of two marks was the modal score for drawing a suitable graph; the most common error being the omission the labelling of the frequency axis.

Question 3

Questions on probability scales are usually well understood and this proved to be the case on this paper. The first two parts were well answered and almost all students gained both marks. The success rate dropped to about a half when the likelihood of an event was tested in part (c).

Question 4

Many students could not use their protractor correctly in part (a) and often gave the supplementary angle 145° instead of the 35° required. In part (b) almost all students were able to mark a point 6.4 cm from P .

Question 5

Almost all students were able to make a start on this question and around a third were able to give fully correct answers though some missed the final communication mark as they did not make a clear statement including 14 km and 15 km.

Question 6

A very well answered question with a very good success rate on interpreting and drawing a pictogram with almost all students gaining full marks.

Question 7

In this pie chart question almost all students gave the correct answer to part (a) but many wrote 90° instead of a fraction equivalent to $\frac{1}{4}$ in part (b). Part (c) was not quite so well answered as students could not deal with $360 \div 45$ and then $24 \div 8$.

Question 8

Most students understood the concept of median in part (a) though many did not order the data but could score one mark for selecting 7. In part (b) few students scored all 4 marks as, though they would often find the median for girls or even the mean for the boys and girls, few were able to find the range for the boys and girls. When it came to making comments whilst many students were able to comment on whether the medians were the same, few were able to make an appropriate comment in the context of the question.

Question 9

A well understood question with almost all students scoring at least one mark and many scoring all three. A surprising number of students incorrectly used tallies in their response to this question.

Question 10

Part (a) was well answered with about three quarters of students gaining at least one mark for $\frac{x}{20}$ or $\frac{9}{x}$, as long as the fraction was less than 1, and many scoring 2 marks for the correct answer. In part (b) one mark was given for finding that there were 12 green beads in the box and a further mark for subtracting 9 from their number of green beads but only about a third of students gave a fully correct answer.

Question 11

Many students struggle with time calculations and this was true in this question. One mark was awarded for one correct time calculation which about quarter of the students achieved but only about half the students gained full marks for the correct answer. Part (b) was better answered with most students gaining at least one mark for finding 15% of £109.

Question 12

Students struggled with this question and frequently related their responses to the wrong scatter graph. In part (a) comments were made about which type of soil the trees grew better in and this was followed by reading off the wrong height in part (b) with the wrong gradient given in (c). Those showing the vertical & horizontal markings on the graph in general went on to get full marks though some were confused by the vertical scale.

Question 13

This question was poorly answered with very few students indeed using algebra. Often $\frac{1}{2}$ was given as the answer in part (a) followed by 100 in (b) but marks could not be awarded for this as in both parts of the question it was clearly stated that an expression in x was required.

Question 14

This question was well understood and well answered by almost all students. Almost all students gained at least one mark in (a) usually for not giving their correct ratio in its simplest form in (a) and in (b) for establishing that the cost of the white tiles was £96 and the blue tiles was £64. A common wrong answer in (b) was £150 (the total cost of all the tiles).

Question 15

Parts (a) and (b) were poorly answered with many students using the word bias in both parts instead of commenting on the sampling method in (a) and the leading nature of the question in (b). Examiners frequently saw comments relating to people lying in part (a) and time frame in (b). Part (c) was understood much better with two thirds of students gaining one mark for the question though often spoiling it by giving times and prices rather than distances.

Summary

Based on their performance on this paper, students are offered the following advice:

- read the question properly in order to ensure that you give an appropriate answer
- take care when dealing with time e.g. finding time differences and counting back from 1 30 pm
- practice answering questions where a comment is required on a questionnaires, in particular learn the difference between bias, leading questions and appropriate sample choice

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