Examiners' Report/
Principal Examiner Feedback

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Pearson Edexcel International A Level in
Further Pure Mathematics FP1 (6667A)
Paper 01

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Further Pure Mathematics FP1 (6667A)

General introduction

The question paper was very accessible and enabled candidates in the lower ability range to show what they could do. It was rare that candidates were unable to access at least some part of the paper. Calculus techniques when required were well understood and, in general, the standard of presentation was satisfactory.

Report on individual questions

Question 1

The majority of candidates made a good start to the paper and a large number of candidates scored full marks on this question. The common mistakes were often missing a full conclusion that clearly stated that the sign of the function had changed in part (*a*) or choosing the wrong interval in part (*b*).

Question 2

This question proved a little more challenging as a number of candidates missed the second solution in part (a). The majority of candidates knew the determinant was required, but some then used the reciprocal in error. Part (b) was often completely correct.

Question 3

This question was attempted very well by the majority of candidates. The most common errors involved poor arithmetic at some point or confusing the values when calculating the gradient of the chord *PQ*.

Question 4

The Newton-Raphson process is well understood and a fully correct solution was not unusual. Again, the most common error leading to an incorrect answer was poor arithmetic.

Question 5

In part (*a*), part (*b*) and part (*c*) candidates usually knew what to do and full marks were not uncommon. Occasional errors usually came from incorrect expansion of brackets or use of surds. Part (*d*) proved to be more challenging and only the best candidates realised what to do to gain the method mark.

Question 6

Part (*a*) was successfully attempted by the majority of candidates and often completely correct. Part (*b*) proved to be more challenging. Candidates were able to make a correct start, but some were then unable manipulate the algebra to produce a three term quadratic and so gained no further credit.

Question 7

Part (*a*) was usually correct with few errors seen. Part (*b*) was either completely correct or candidates attempted to multiply the wrong matrices and gained no credit.

Question 8

Part (a) was a straightforward proof and many candidates tackled it with confidence to produce the given answer. Part (*b*) and part (*c*) were more demanding. Most candidates could make some progress, but confusing the point *P* and the point (6*a*, 0) lead to the area of the wrong triangle being calculated.

Question 9

The majority of candidates could start this question successfully and full marks were often awarded. Unfortunately some solutions contained errors in the expansion of brackets which meant the simultaneous equations found them gave the wrong answers when solved. This usually meant most of the five accuracy marks were lost.

Question 10

In general, the methods required for mathematical induction were well understood, but the specific requirements of this question were missed by some candidates. Statements had been learned and used in the appropriate context. The conclusions were often well conceived, particularly when defining the values for which the proof was valid. Some candidates struggled to offer a complete solution in each part with accuracy being lost, especially in part (*b*).

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:
http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx