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| Centre No. | | | | | | Paper Reference | | | | | | Surname | Initial(s) | |
| Candidate No. | | | | | | 6 | 6 | 6 | 8 | / | 0 | 1 | Signature | |

Paper Reference(s)

6668/01

Edexcel GCE

Further Pure Mathematics FP2

Advanced/Advanced Subsidiary

Friday 19 June 2009 – Afternoon

Time: 1 hour 30 minutes

Examiner's use only

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Team Leader's use only

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Materials required for examination

Mathematical Formulae (Orange)

Items included with question papers

Nil

Candidates may use any calculator allowed by the regulations of the Joint Council for Qualifications. Calculators must not have the facility for symbolic algebra manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.

| Question Number | Leave Blank |
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Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature. Check that you have the correct question paper. Answer ALL the questions. You must write your answer to each question in the space following the question. When a calculator is used, the answer should be given to an appropriate degree of accuracy.

Information for Candidates

A booklet 'Mathematical Formulae and Statistical Tables' is provided. Full marks may be obtained for answers to ALL questions. The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2). There are 8 questions in this question paper. The total mark for this question paper is 75. There are 28 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

You must ensure that your answers to parts of questions are clearly labelled. You should show sufficient working to make your methods clear to the Examiner. Answers without working may not gain full credit.

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2. Solve the equation

$$z^3 = 4\sqrt{2} - 4\sqrt{2}i,$$

giving your answers in the form $r(\cos \theta + i \sin \theta)$, where $-\pi < \theta \leq \pi$.

(6)



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Question 3 continued

Blank lined area for writing answers.

(Total 8 marks)

Q3



Question 5 continued

Handwriting practice area consisting of 30 horizontal lines.



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Question 6 continued

Lined writing area for question 6.



- 7. (a) Sketch the graph of $y = |x^2 - a^2|$, where $a > 1$, showing the coordinates of the points where the graph meets the axes. (2)

- (b) Solve $|x^2 - a^2| = a^2 - x$, $a > 1$. (6)

- (c) Find the set of values of x for which $|x^2 - a^2| > a^2 - x$, $a > 1$. (4)



Question 8 continued

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(Total 15 marks)

Q8

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TOTAL FOR PAPER: 75 MARKS

END

