

Please check the examination details below before entering your candidate information

Candidate surname

Other names

**Pearson Edexcel  
Level 3 GCE**

Centre Number

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Candidate Number

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**Thursday 6 June 2019**

Afternoon (Time: 1 hour 30 minutes)

Paper Reference **9FM0/02****Further Mathematics****Advanced****Paper 2: Core Pure Mathematics 2****You must have:**

Mathematical Formulae and Statistical Tables (Green), calculator

Total Marks

**Candidates may use any calculator permitted by Pearson regulations. Calculators must not have the facility for algebraic manipulation, differentiation and integration, or have retrievable mathematical formulae stored in them.**

**Instructions**

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B).
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions and ensure that your answers to parts of questions are clearly labelled.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*
- You should show sufficient working to make your methods clear.  
Answers without working may not gain full credit.
- Answers should be given to three significant figures unless otherwise stated.

**Information**

- A booklet 'Mathematical Formulae and Statistical Tables' is provided.
- There are 8 questions in this question paper. The total mark for this paper is 75.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

**Advice**

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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2. The roots of the equation

$$x^3 - 2x^2 + 4x - 5 = 0$$

are  $p$ ,  $q$  and  $r$ .

Without solving the equation, find the value of

(i)  $\frac{2}{p} + \frac{2}{q} + \frac{2}{r}$

(ii)  $(p - 4)(q - 4)(r - 4)$

(iii)  $p^3 + q^3 + r^3$

(8)

DO NOT WRITE IN THIS AREA

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DO NOT WRITE IN THIS AREA























































