

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson Edexcel
International
Advanced Level

Centre Number

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Candidate Number

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Wednesday 10 October 2018

Morning (Time: 2 hours 30 minutes)

Paper Reference **WMA01/01**

Core Mathematics C12

Advanced Subsidiary

You must have:

Mathematical Formulae and Statistical Tables (Blue)

Total Marks

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.

Instructions

- Use **black** ink or ball-point pen.
- If pencil is used for diagrams/sketches/graphs it must be dark (HB or B). Coloured pencils and highlighter pens must not be used.
- **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.
- When a calculator is used, the answer should be given to an appropriate degree of accuracy.

Information

- The total mark for this paper is 125.
- 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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1. (i) Given that $125\sqrt{5} = 5^a$, find the value of a .

(2)

(ii) Show that $\frac{16}{4 - \sqrt{8}} = 8 + 4\sqrt{2}$

You must show all stages of your working.

(3)

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6. (a) Sketch the graph of $y = \left(\frac{1}{2}\right)^x$, $x \in \mathbb{R}$, showing the coordinates of the point at which the graph crosses the y-axis.

(2)

The table below gives corresponding values of x and y , for $y = \left(\frac{1}{2}\right)^x$

The values of y are rounded to 3 decimal places.

x	-0.9	-0.8	-0.7	-0.6	-0.5
y	1.866	1.741	1.625	1.516	1.414

- (b) Use the trapezium rule with all the values of y from the table to find an approximate value for

$$\int_{-0.9}^{-0.5} \left(\frac{1}{2}\right)^x dx$$

(3)

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