

Write your name here

|         |             |
|---------|-------------|
| Surname | Other names |
|---------|-------------|

  

|                           |                                                                                                                                                                                                                                                                                                                                   |                  |  |  |  |  |                                                                                                                                                                                                                                                                                      |  |  |  |  |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <b>Edexcel</b>            | Centre Number                                                                                                                                                                                                                                                                                                                     | Candidate Number |  |  |  |  |                                                                                                                                                                                                                                                                                      |  |  |  |  |
| <b>International GCSE</b> | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> </tr> </table> |                  |  |  |  |  | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> </tr> </table> |  |  |  |  |
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|                           |                                                                                                                                                                                                                                                                                                                                   |                  |  |  |  |  |                                                                                                                                                                                                                                                                                      |  |  |  |  |

  

# Further Pure Mathematics

## Paper 2

  

|                                                           |                                   |
|-----------------------------------------------------------|-----------------------------------|
| Thursday 16 June 2016 – Afternoon<br><b>Time: 2 hours</b> | Paper Reference<br><b>4PM0/02</b> |
|-----------------------------------------------------------|-----------------------------------|

  

|                                 |             |
|---------------------------------|-------------|
| <b>Calculators may be used.</b> | Total Marks |
|---------------------------------|-------------|

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Without sufficient working, correct answers may be awarded no marks.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 100.
- 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.
- Check your answers if you have time at the end.

*Turn over* ►

P46902A

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1/1/1/





**Question 1 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area with horizontal dotted lines for writing, spanning most of the page width and height.

**(Total for Question 1 is 5 marks)**





**Question 2 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area with horizontal dotted lines for writing.

**(Total for Question 2 is 6 marks)**





**Question 3 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area with a rounded border, containing numerous horizontal dotted lines for writing.





4 Differentiate with respect to  $x$

$$e^{2x} \cos 3x$$

(3)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(Total for Question 4 is 3 marks)





**Question 5 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area for writing answers, consisting of multiple horizontal dotted lines.



**Question 5 continued**

A large rectangular area with horizontal dotted lines for writing answers.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 5 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area with horizontal dotted lines for writing answers.

**(Total for Question 5 is 10 marks)**





**Question 6 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area with a rounded top and bottom, containing numerous horizontal dotted lines for writing.



**Question 6 continued**

A large rectangular area with horizontal dotted lines for writing answers.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 6 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area with horizontal dotted lines for writing.

**(Total for Question 6 is 10 marks)**





**Question 7 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area with horizontal dotted lines for writing.



**Question 7 continued**

Area with horizontal dotted lines for writing answers.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 7 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area with horizontal dotted lines for writing answers.

**(Total for Question 7 is 12 marks)**







**Question 8 continued**

Area for writing answers, consisting of multiple horizontal dotted lines.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 8 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area for writing answers, consisting of multiple horizontal dotted lines.

**(Total for Question 8 is 16 marks)**





**Question 9 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

A large rectangular area containing numerous horizontal dotted lines for writing.



**Question 9 continued**

Area for writing answers, consisting of multiple horizontal dotted lines.

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 9 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area for writing answers, consisting of multiple horizontal dotted lines.

**(Total for Question 9 is 16 marks)**





**Question 10 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area for writing answers, consisting of multiple horizontal dotted lines.



**Question 10 continued**

Area for writing answers, consisting of multiple horizontal dotted lines.

**(Total for Question 10 is 12 marks)**

**TOTAL FOR PAPER IS 100 MARKS**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

