

Write your name here

Surname	Other names
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Edexcel Centre Number

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 Candidate Number

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International GCSE

Further Pure Mathematics

Paper 2

Tuesday 22 January 2013 – Afternoon Time: 2 hours	Paper Reference 4PM0/02
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Calculators may be used.	Total Marks
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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 ►

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Question 5 continued

A series of horizontal dotted lines for writing the answer to Question 5.

Question 6 continued

A large rectangular area containing 25 horizontal dotted lines for writing answers.

- 9 The third and fifth terms of a geometric series S are 48 and 768 respectively. Find
- (a) the two possible values of the common ratio of S , (3)
 - (b) the first term of S . (1)

Given that the sum of the first 5 terms of S is 615

- (c) find the sum of the first 9 terms of S . (4)

Another geometric series T has the same first term as S . The common ratio of T is $\frac{1}{r}$ where r is one of the values obtained in part (a). The n th term of T is t_n

Given that $t_2 > t_3$

- (d) find the common ratio of T . (1)

The sum of the first n terms of T is T_n

- (e) Writing down all the numbers on your calculator display, find T_9 . (2)

The sum to infinity of T is T_∞

Given that $T_\infty - T_n > 0.002$

- (f) find the greatest value of n . (5)

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