



Oxford Cambridge and RSA

## Wednesday 3 June 2015 – Morning

### FSMQ ADVANCED LEVEL

6993/01 Additional Mathematics

### PRINTED ANSWER BOOK



Candidates answer on the Printed Answer Book.

**OCR supplied materials:**

- Question Paper 6993/01 (inserted)

**Other materials required:**

- Scientific or graphical calculator

**Duration:** 2 hours



6 9 9 3 0 1 \*

Candidate forename					Candidate surname				
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Centre number						Candidate number			
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### INSTRUCTIONS TO CANDIDATES

These instructions are the same on the Printed Answer Book and the Question Paper.

- The Question Paper will be found inside the Printed Answer Book.
- Write your name, centre number and candidate number in the spaces provided on the Printed Answer Book. Please write clearly and in capital letters.
- **Write your answer to each question in the space provided in the Printed Answer Book.** Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Do **not** write in the bar codes.
- You are permitted to use a scientific or graphical calculator in this paper.
- Final answers should be given correct to three significant figures where appropriate.

### INFORMATION FOR CANDIDATES

This information is the same on the Printed Answer Book and the Question Paper.

- The number of marks is given in brackets [ ] at the end of each question or part question on the Question Paper.
- You are advised that an answer may receive **no marks** unless you show sufficient detail of the working to indicate that a correct method is being used.
- The total number of marks for this paper is **100**.
- The Printed Answer Book consists of **20** pages. The Question Paper consists of **8** pages. Any blank pages are indicated.

Section A

1	
2 (i)	
2 (ii)	







7(i)	
	7(ii)







Section B

11 (i)	
11 (ii)	
11 (iii)	

11(iv)

<b>12 (a)(i)</b>	
<b>12 (a)(ii)</b>	

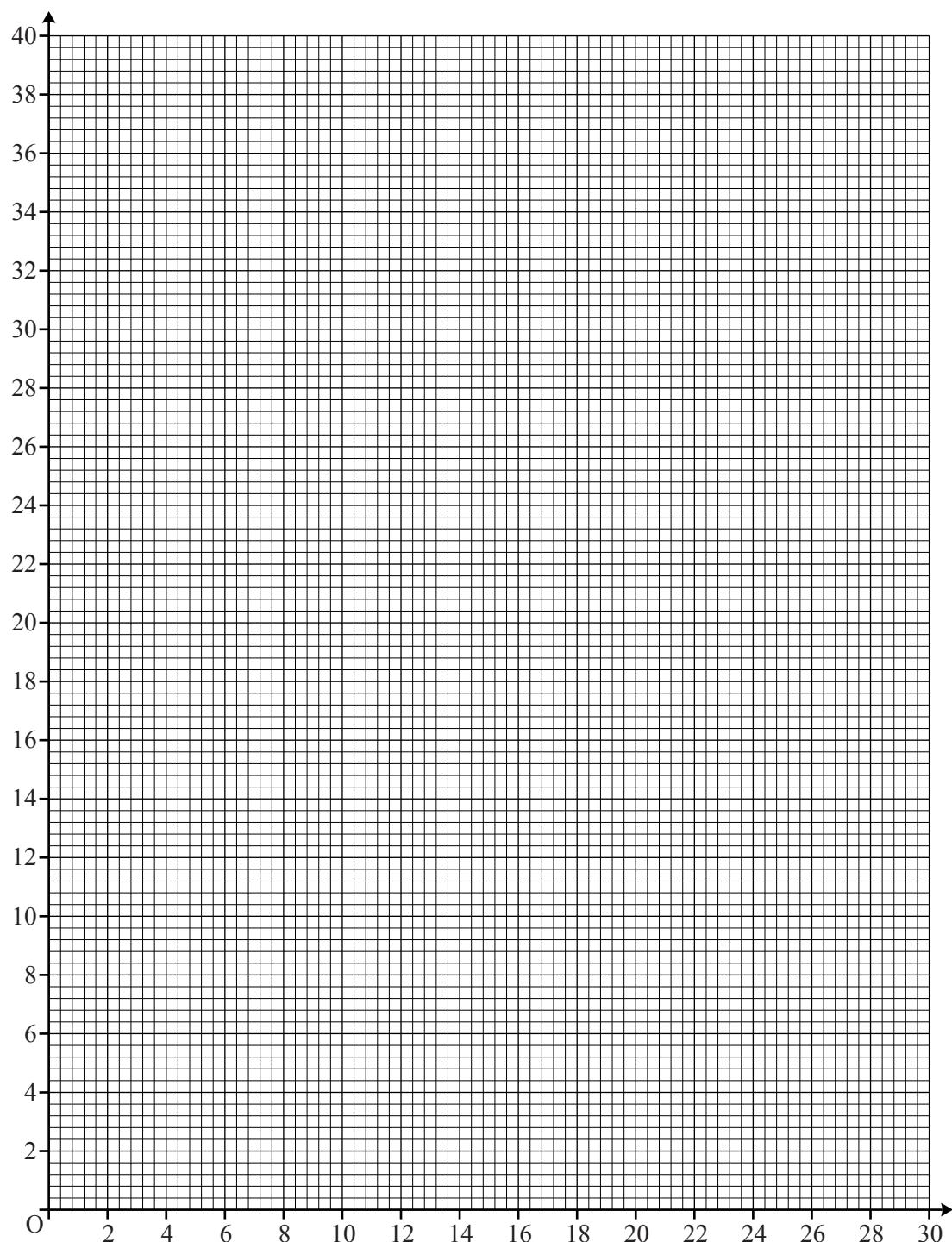
12 (b)



<b>13 (iii)</b>	
<b>13 (iv)</b>	

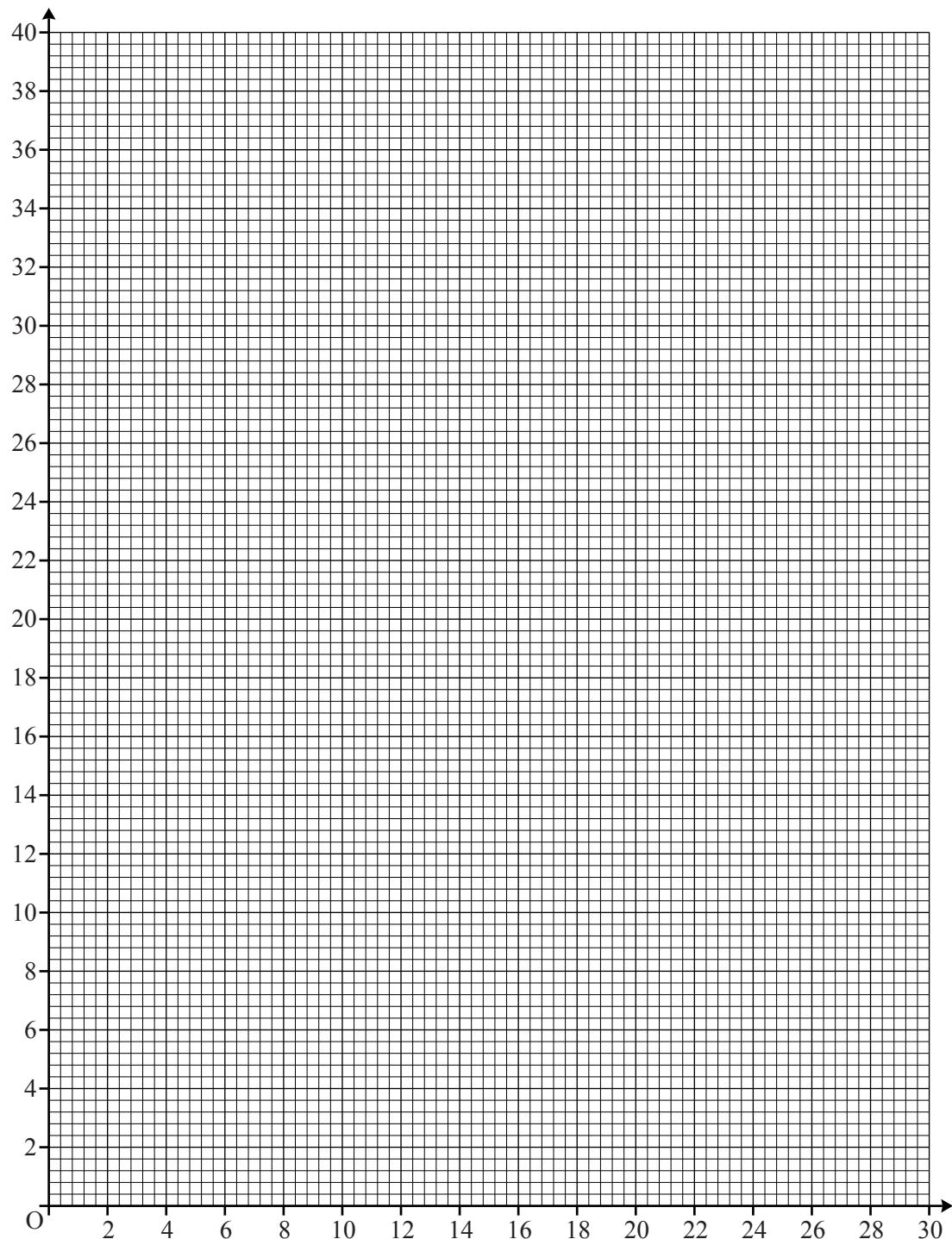
14(i)	
14(ii)	
14(iii)	<i>For the graph of part (iii) see facing page.</i>
14(iv)	
14(v)	

14(iii)



*There is a spare copy of this graph on page 18. If you wish to offer a second attempt, then you must cross through the attempt on this page.*

*This is a spare copy of the graph for Question 14 (iii).  
Only write on this page if you want to offer a second attempt at the graph.  
If you do so, then you must cross through the first attempt on page 17.*



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