

# OCR

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



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**

<b>1</b>	
<b>2 (i)</b>	
<b>2 (ii)</b>	

<b>3</b>	
<b>4 (i)</b>	
<b>4 (ii)</b>	

<b>5 (i)</b>	

<b>5 (ii)</b>	

**6 (i)**


**6 (ii)**


<b>7(i)</b>	
<b>7(ii)</b>	

**8(i)**


**8(ii)**


**9(i)**


**9(ii)**




<b>10 (i)</b>	

<b>10 (ii)</b>	

Section B

<b>11 (i)</b>	
<b>11 (ii)</b>	
<b>11 (iii)</b>	

<b>11 (iv)</b>	

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

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

<b>12(b)</b>	

<b>13 (i)</b>	

<b>13 (ii)</b>	

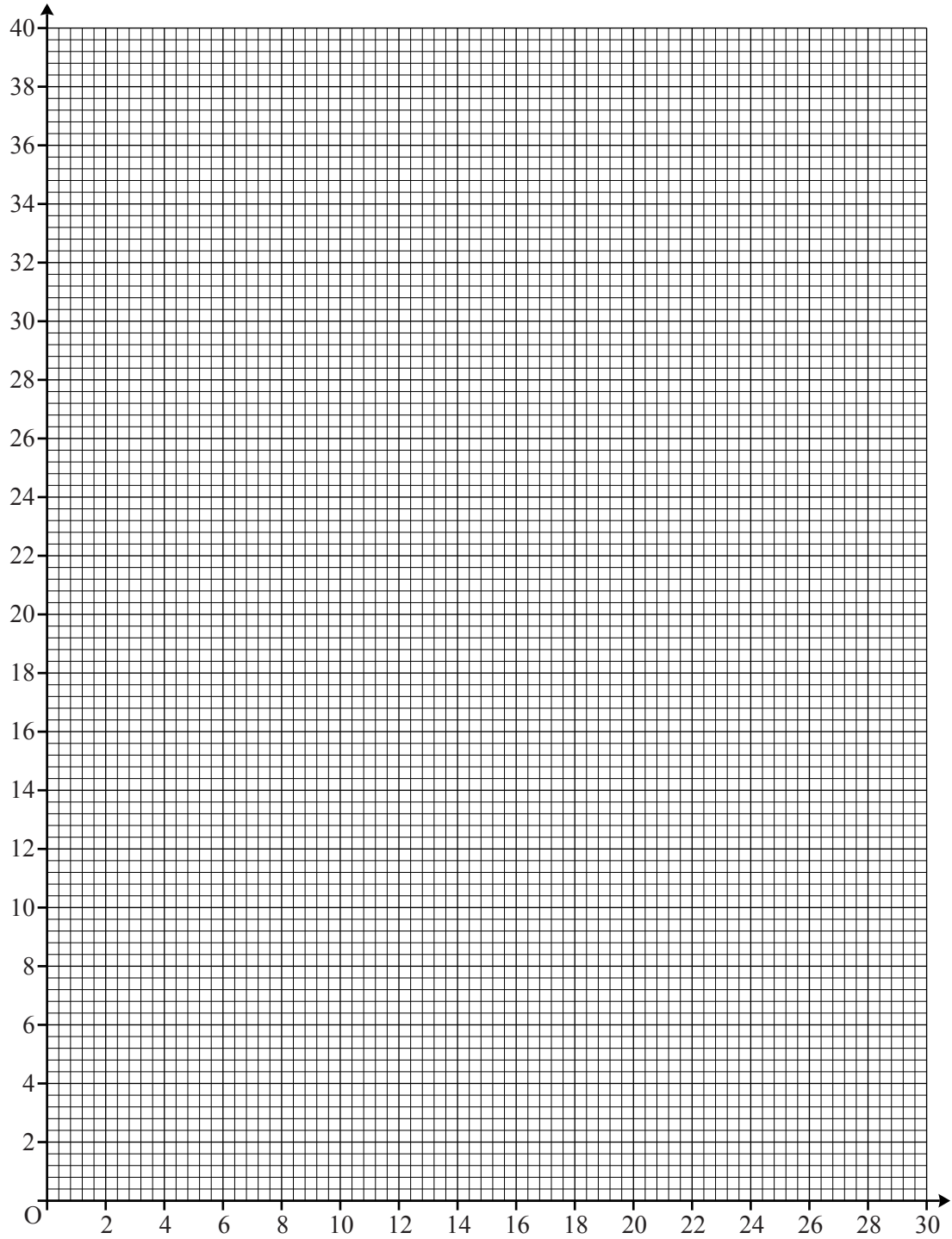
<b>13 (iii)</b>	

<b>13 (iv)</b>	

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

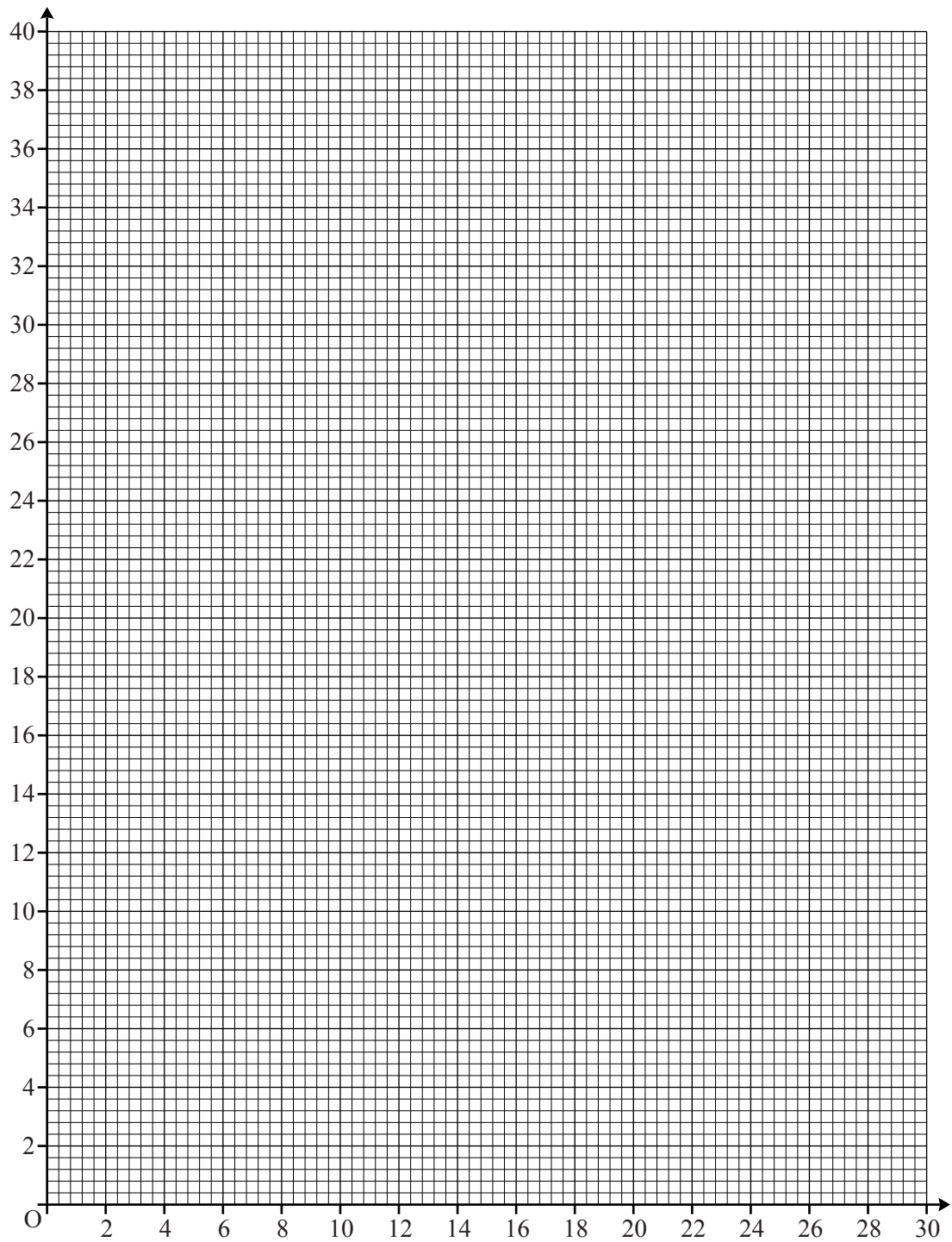


14 (iii)



*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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**PLEASE DO NOT WRITE ON THIS PAGE**

**PLEASE DO NOT WRITE ON THIS PAGE**

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