

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**

**Thursday 12 June 2025 – Afternoon**

**A Level Mathematics B (MEI)**

**H640/02 Pure Mathematics and Statistics**

**Printed Answer Booklet**

**Time allowed: 2 hours  
plus your additional time allowance**

**YOU MUST HAVE:**

**Question Paper H640/02 (with this document)**

**Loose sheet for Question 6 (with this document)**

**a scientific or graphical calculator**

**Please write clearly in black ink.**

**Centre number**

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|--|--|--|--|--|

**Candidate number**

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

**First name(s)** \_\_\_\_\_

**Last name** \_\_\_\_\_

**READ INSTRUCTIONS OVERLEAF**



## **INSTRUCTIONS**

**Use black ink. You can use an HB pencil, but only for graphs and diagrams.**

**Write your answer to each question in the space provided in the PRINTED ANSWER BOOKLET. If you need extra space use the lined pages at the end of the Printed Answer Booklet. The question numbers must be clearly shown.**

**Answer ALL the questions.**

**Where appropriate, your answer should be supported with working. Marks might be given for using a correct method, even if your answer is wrong.**

**Give your final answers to a degree of accuracy that is appropriate to the context.**

## **ADVICE**

**Read each question carefully before you start your answer.**

**BLANK PAGE**

**SECTION A (23 marks)**

**1(a)**

---

---

**1(b)**

---

---

**2**

---

---

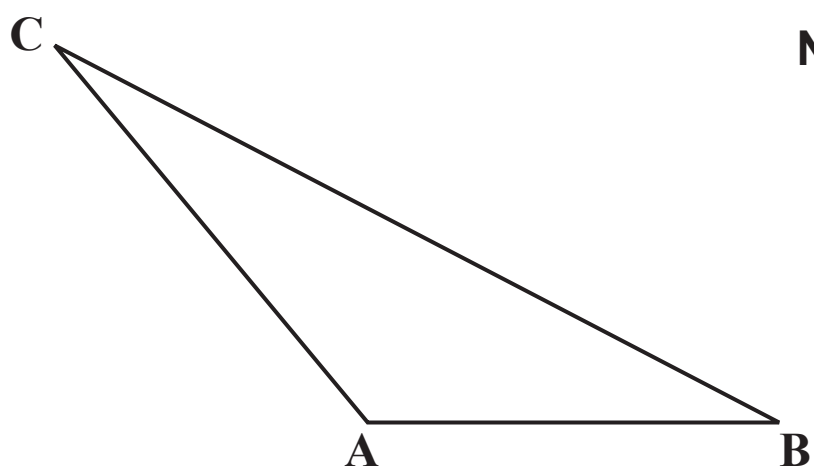
---

---

---

---

---



---

---

---

---

---

---

---

---

---

---

---

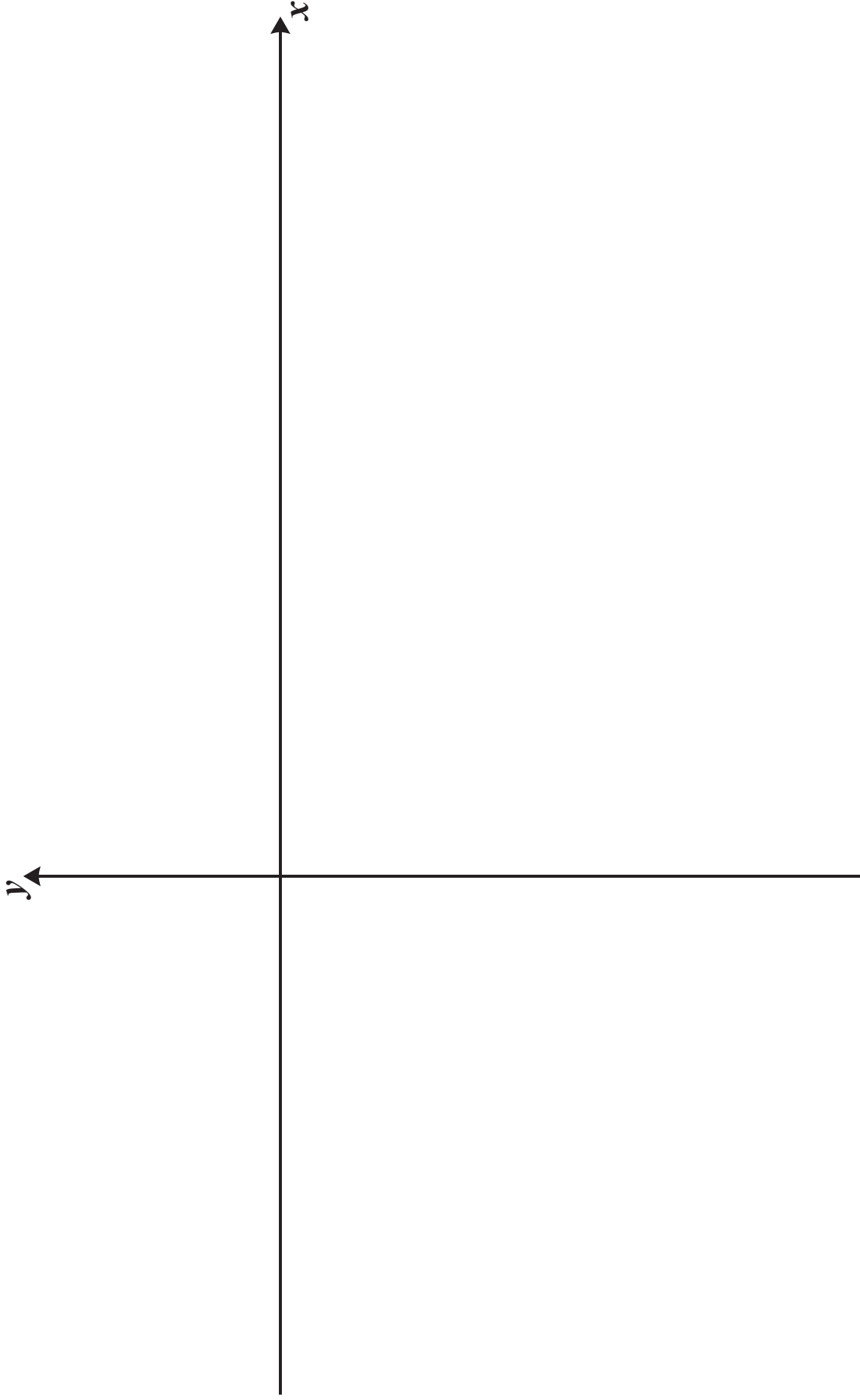
---

---

---

[illegible]

4(c)



This image shows a single page from a notebook or ledger. It features a series of evenly spaced, horizontal black lines running across the width of the page. The lines are thin and uniform, providing a guide for writing. There are no margins, headers, footers, or other markings present on the page. The background is a solid off-white color.

---

---

---

---

---

---

**6(a)**

---

---

---

---

**6(b)**

---

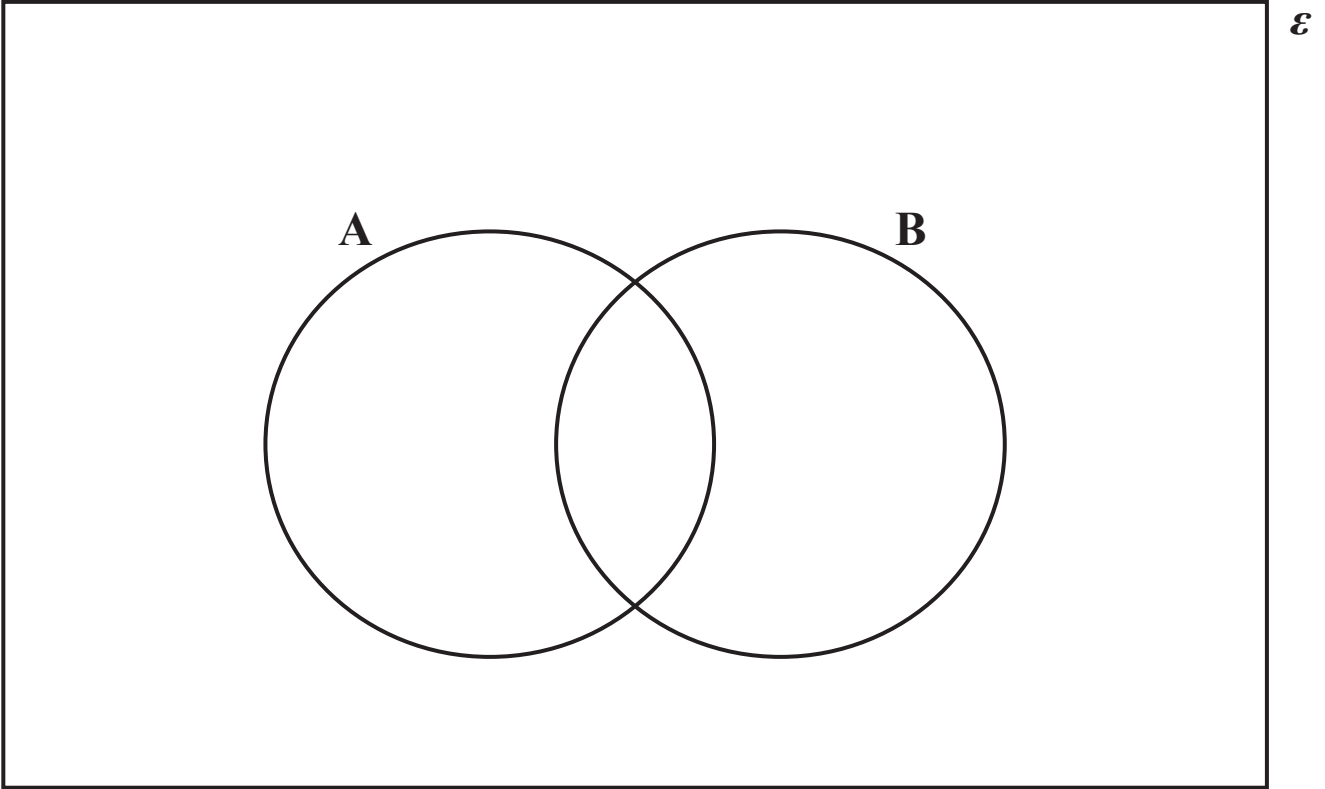
---

---

---

---

7(a)



7(b)

---

---

---

---

---

---

---

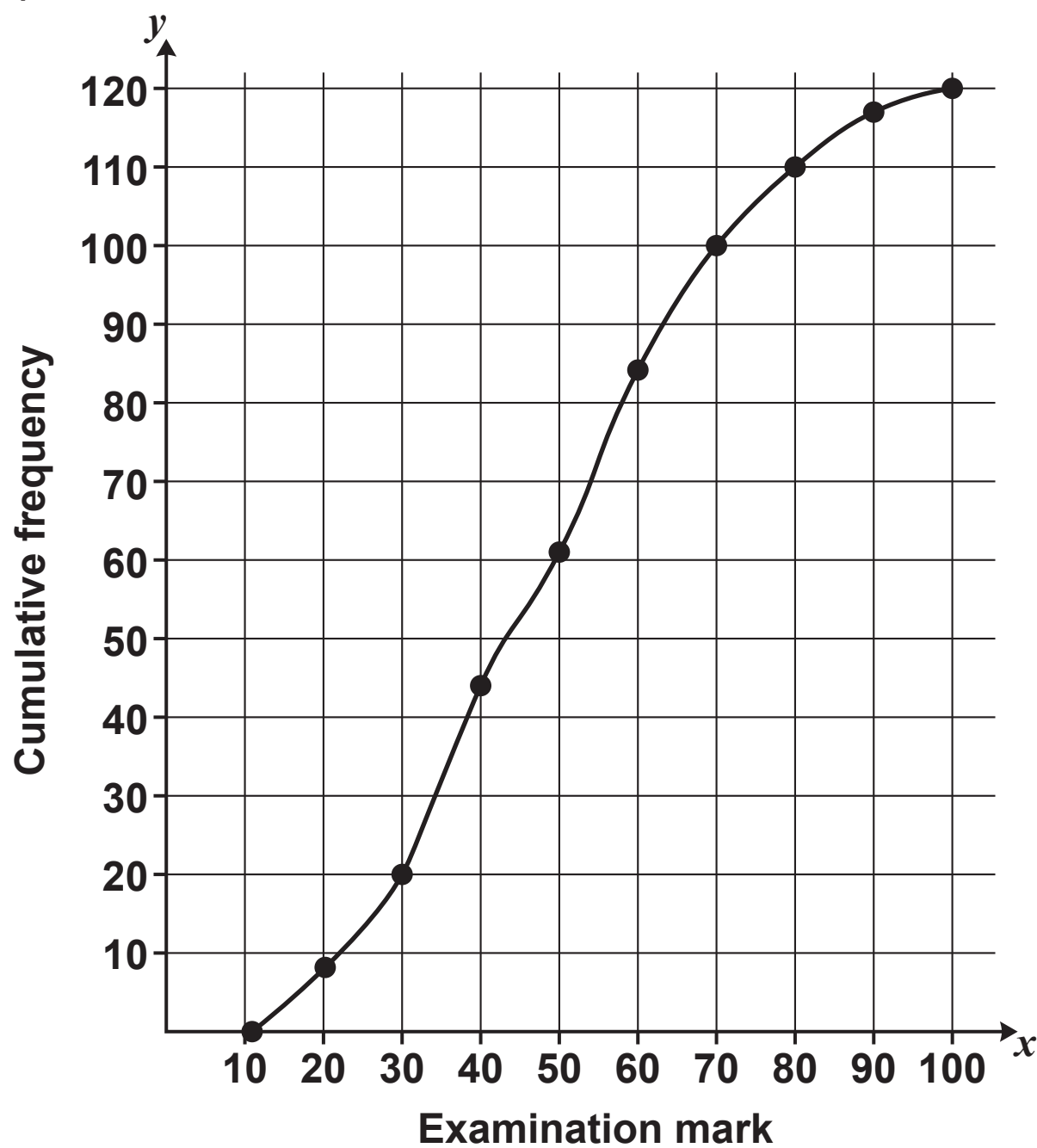
---

---

[illegible]

SECTION B (77 Marks)

8(a)



---

---

---

---

---

---

---

---

---

---

---

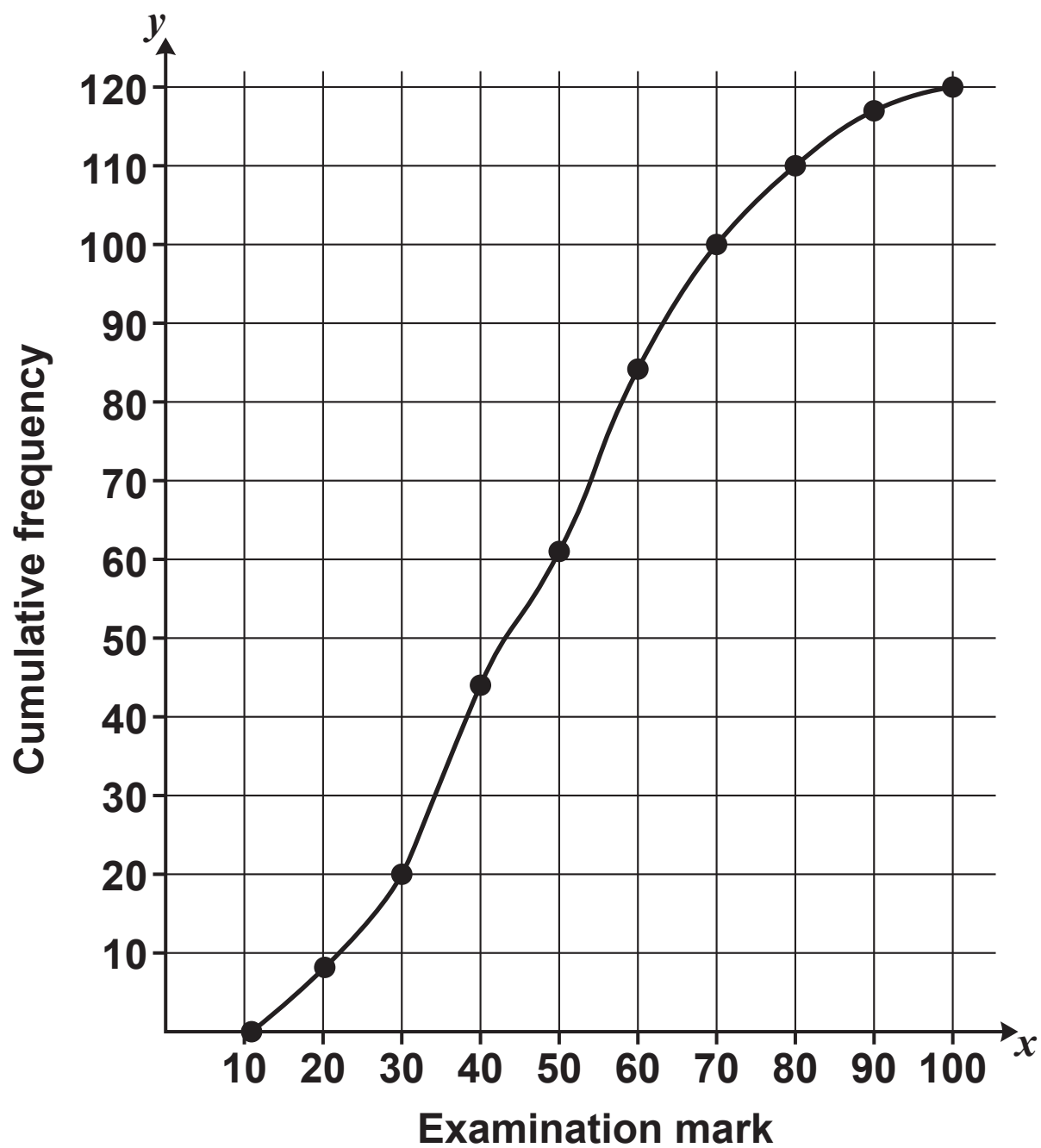
---

---

---

---

8(b)



---

---

---

---

**9(a)**

---

---

---

**9(b)**

---

---

---

---

---

---

---

---

---

**10(a)**

---

---

---

---

---

**10(b)**

---

---

---

---

---

**10(c)**

---

---

---

---

---

**10(d)**

---

---

---

---

---

**10(e)**

---

---

---

---

---

**11(a)**

---

---

---

---

---

---

11(b)

---

---

---

---

---

11(c)

---

---

---

---

11(d)

---

---

---

---

---

---

---

---

---

---

**11(e)**



[illegible]

**13(a)**

---

---

---

---

---

---

---

**13(b)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

[illegible]

---

**14(a)**

---

---

---

---

---

---

---

---

---

---

**14(b)(i)**

---

---

---

---

**14(b)(ii)**

---

---

---

---

---

**14(c)(i)**

---

---

---

---

**14(c)(ii)**

---

---

---

---

---

---

---

---

---

---

**14(d)**

[illegible]

[illegible]

**15(a)(i)**

---

---

---

---

---

**15(a)(ii)**

---

---

---

---

---

---

---

---

---

---

**15(b)**

---

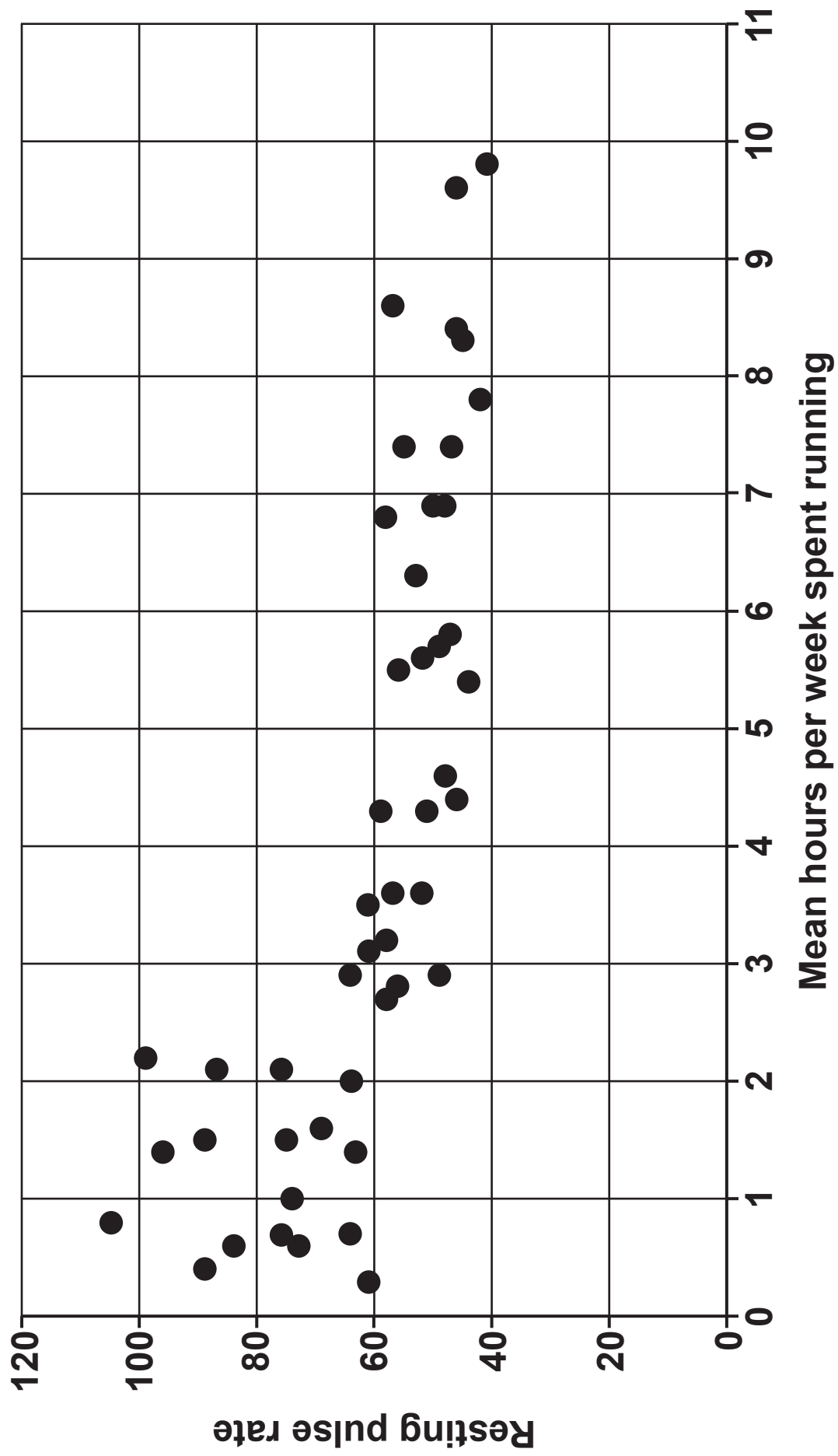
---

---

---

---

15(c)



**15(d)**

**Group to the left of the vertical line**

$$r_s = 0.20936 \quad p\text{-value} = 0.41998:$$
[illegible]

**$r_s = -0.61349$   $p\text{-value} = 0.00031$ :**

**$r_s = -0.61349$   $p\text{-value} = 0.00031$ :**

[illegible]

[illegible]

16(b)

---

---

---

---

---

---

---

---



[illegible]

[illegible]

---

---

---

---

---

---

---

---

**EXTRA ANSWER SPACE**

**If you need extra space use these lined pages. You must write the question numbers clearly in the margin.**

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |



**Copyright Information**

**OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website ([www.ocr.org.uk](http://www.ocr.org.uk)) after the live examination series.**

**If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.**

**For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.**

**OCR is part of Cambridge University Press & Assessment, which is itself a department of the University of Cambridge.**