



Oxford Cambridge and RSA

Thursday 12 June 2025 – Afternoon

A Level Mathematics B (MEI)

H640/02 Pure Mathematics and Statistics

Printed Answer Booklet

Time allowed: 2 hours



You must have:

- Question Paper H640/02 (inside this document)
- a scientific or graphical calculator



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s)

Last name

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 page 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.

INFORMATION

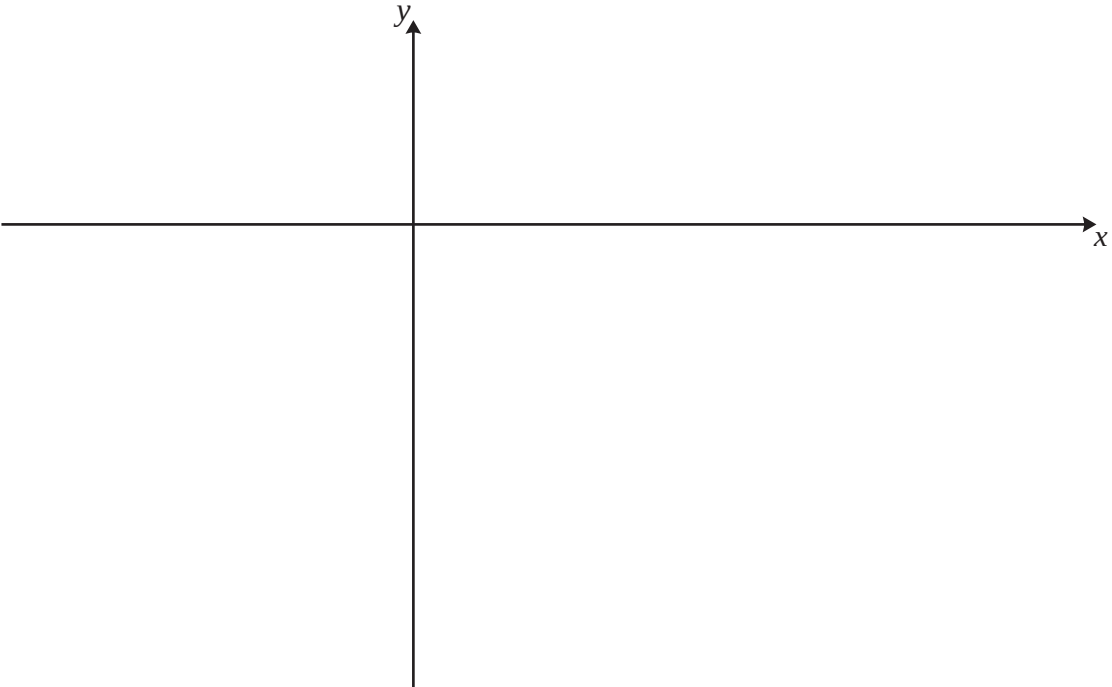
- This document has **20** pages.

ADVICE

- Read each question carefully before you start your answer.

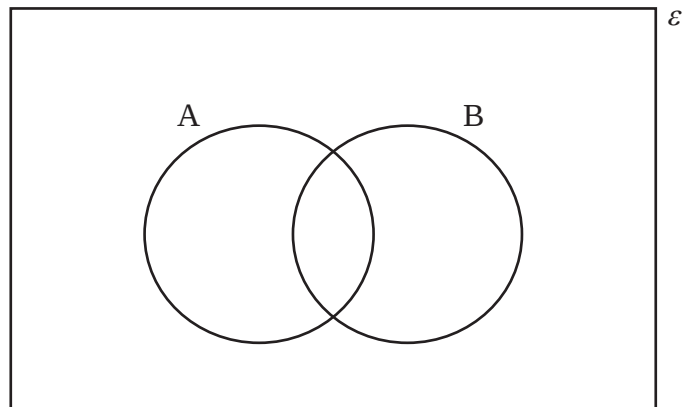
Section A (23 marks)

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4(b)	
4(c)	

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6(a)	
6(b)	

7(a)

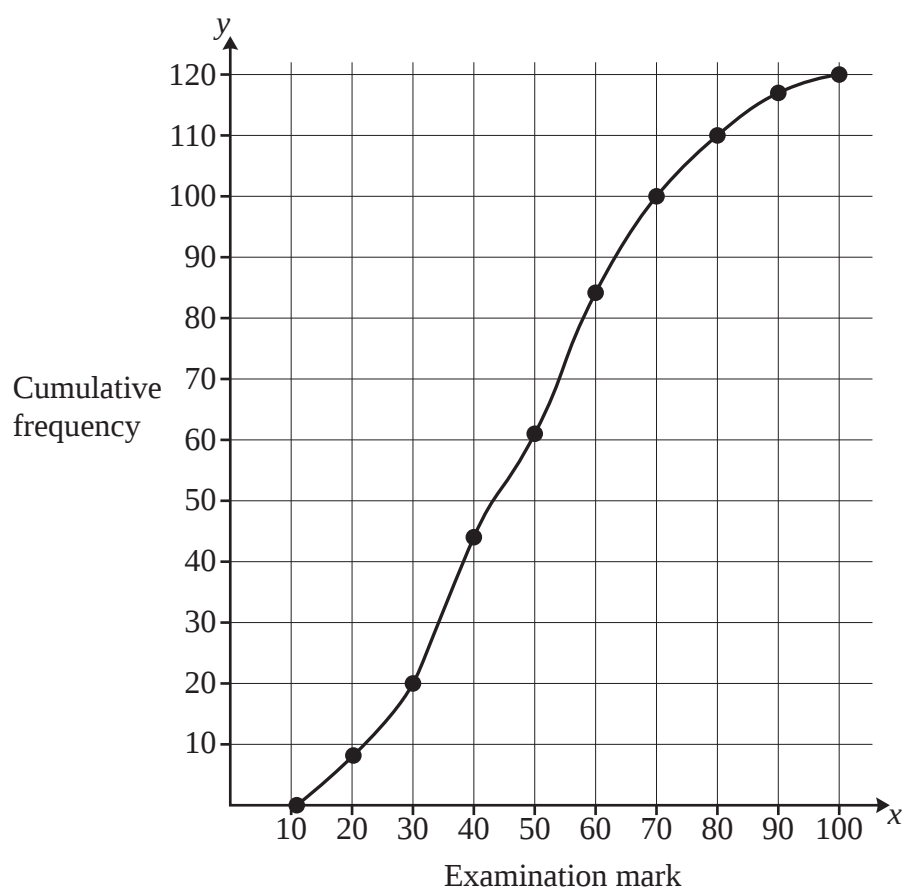


7(b)

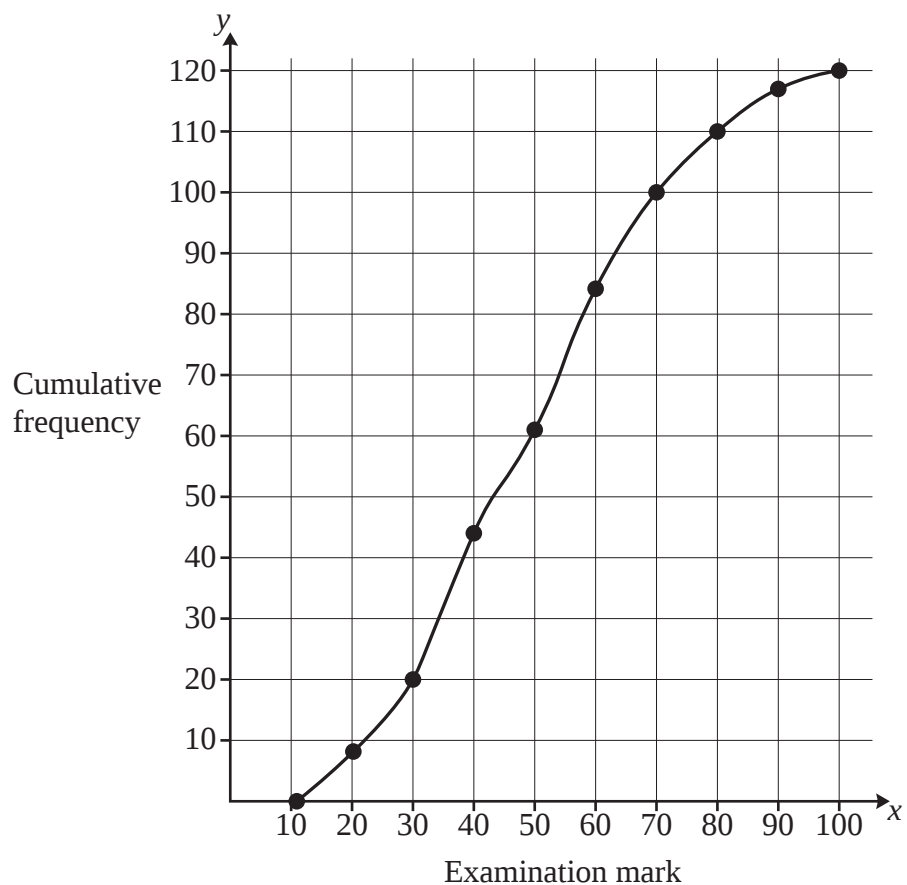
7(c)

Section B (77 marks)

8(a)



8(b)



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11(a)	

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15(c)	The scatter plot displays the relationship between the mean hours per week spent running (x-axis) and the resting pulse rate (y-axis). The x-axis ranges from 0 to 11 with major grid lines every 1 unit. The y-axis ranges from 0 to 120 with major grid lines every 20 units. There are 40 data points plotted. The points are clustered at low running hours (0-2) with high resting pulse rates (60-100), and at higher running hours (3-10) with lower resting pulse rates (40-60). The overall trend is a negative correlation. <table border="1"> <caption>Approximate data points from the scatter plot</caption> <thead> <tr> <th>Mean hours per week spent running</th> <th>Resting pulse rate</th> </tr> </thead> <tbody> <tr><td>0.2</td><td>60</td></tr> <tr><td>0.3</td><td>85</td></tr> <tr><td>0.4</td><td>75</td></tr> <tr><td>0.5</td><td>80</td></tr> <tr><td>0.6</td><td>65</td></tr> <tr><td>0.7</td><td>105</td></tr> <tr><td>0.8</td><td>70</td></tr> <tr><td>0.9</td><td>75</td></tr> <tr><td>1.0</td><td>95</td></tr> <tr><td>1.1</td><td>60</td></tr> <tr><td>1.2</td><td>70</td></tr> <tr><td>1.3</td><td>90</td></tr> <tr><td>1.4</td><td>65</td></tr> <tr><td>1.5</td><td>75</td></tr> <tr><td>1.6</td><td>60</td></tr> <tr><td>1.7</td><td>70</td></tr> <tr><td>1.8</td><td>65</td></tr> <tr><td>1.9</td><td>100</td></tr> <tr><td>2.0</td><td>60</td></tr> <tr><td>2.1</td><td>75</td></tr> <tr><td>2.2</td><td>85</td></tr> <tr><td>2.3</td><td>100</td></tr> <tr><td>2.4</td><td>65</td></tr> <tr><td>2.5</td><td>55</td></tr> <tr><td>2.6</td><td>50</td></tr> <tr><td>2.7</td><td>60</td></tr> <tr><td>2.8</td><td>55</td></tr> <tr><td>2.9</td><td>65</td></tr> <tr><td>3.0</td><td>50</td></tr> <tr><td>3.1</td><td>60</td></tr> <tr><td>3.2</td><td>55</td></tr> <tr><td>3.3</td><td>60</td></tr> <tr><td>3.4</td><td>50</td></tr> <tr><td>3.5</td><td>55</td></tr> <tr><td>3.6</td><td>60</td></tr> <tr><td>3.7</td><td>50</td></tr> <tr><td>3.8</td><td>55</td></tr> <tr><td>3.9</td><td>60</td></tr> <tr><td>4.0</td><td>50</td></tr> <tr><td>4.1</td><td>55</td></tr> <tr><td>4.2</td><td>60</td></tr> <tr><td>4.3</td><td>45</td></tr> <tr><td>4.4</td><td>50</td></tr> <tr><td>4.5</td><td>45</td></tr> <tr><td>4.6</td><td>50</td></tr> <tr><td>4.7</td><td>45</td></tr> <tr><td>4.8</td><td>50</td></tr> <tr><td>4.9</td><td>45</td></tr> <tr><td>5.0</td><td>50</td></tr> <tr><td>5.1</td><td>45</td></tr> <tr><td>5.2</td><td>50</td></tr> <tr><td>5.3</td><td>45</td></tr> <tr><td>5.4</td><td>50</td></tr> <tr><td>5.5</td><td>45</td></tr> <tr><td>5.6</td><td>50</td></tr> <tr><td>5.7</td><td>45</td></tr> <tr><td>5.8</td><td>50</td></tr> <tr><td>5.9</td><td>45</td></tr> <tr><td>6.0</td><td>50</td></tr> <tr><td>6.1</td><td>45</td></tr> <tr><td>6.2</td><td>50</td></tr> <tr><td>6.3</td><td>45</td></tr> <tr><td>6.4</td><td>50</td></tr> <tr><td>6.5</td><td>45</td></tr> <tr><td>6.6</td><td>50</td></tr> <tr><td>6.7</td><td>45</td></tr> <tr><td>6.8</td><td>50</td></tr> <tr><td>6.9</td><td>45</td></tr> <tr><td>7.0</td><td>50</td></tr> <tr><td>7.1</td><td>45</td></tr> <tr><td>7.2</td><td>50</td></tr> <tr><td>7.3</td><td>45</td></tr> <tr><td>7.4</td><td>50</td></tr> <tr><td>7.5</td><td>45</td></tr> <tr><td>7.6</td><td>50</td></tr> <tr><td>7.7</td><td>45</td></tr> <tr><td>7.8</td><td>50</td></tr> <tr><td>7.9</td><td>45</td></tr> <tr><td>8.0</td><td>50</td></tr> <tr><td>8.1</td><td>45</td></tr> <tr><td>8.2</td><td>50</td></tr> <tr><td>8.3</td><td>45</td></tr> <tr><td>8.4</td><td>50</td></tr> <tr><td>8.5</td><td>45</td></tr> <tr><td>8.6</td><td>50</td></tr> <tr><td>8.7</td><td>45</td></tr> <tr><td>8.8</td><td>50</td></tr> <tr><td>8.9</td><td>45</td></tr> <tr><td>9.0</td><td>50</td></tr> <tr><td>9.1</td><td>45</td></tr> <tr><td>9.2</td><td>50</td></tr> <tr><td>9.3</td><td>45</td></tr> <tr><td>9.4</td><td>50</td></tr> <tr><td>9.5</td><td>45</td></tr> <tr><td>9.6</td><td>50</td></tr> <tr><td>9.7</td><td>45</td></tr> <tr><td>9.8</td><td>50</td></tr> <tr><td>9.9</td><td>45</td></tr> <tr><td>10.0</td><td>50</td></tr> </tbody> </table>	Mean hours per week spent running	Resting pulse rate	0.2	60	0.3	85	0.4	75	0.5	80	0.6	65	0.7	105	0.8	70	0.9	75	1.0	95	1.1	60	1.2	70	1.3	90	1.4	65	1.5	75	1.6	60	1.7	70	1.8	65	1.9	100	2.0	60	2.1	75	2.2	85	2.3	100	2.4	65	2.5	55	2.6	50	2.7	60	2.8	55	2.9	65	3.0	50	3.1	60	3.2	55	3.3	60	3.4	50	3.5	55	3.6	60	3.7	50	3.8	55	3.9	60	4.0	50	4.1	55	4.2	60	4.3	45	4.4	50	4.5	45	4.6	50	4.7	45	4.8	50	4.9	45	5.0	50	5.1	45	5.2	50	5.3	45	5.4	50	5.5	45	5.6	50	5.7	45	5.8	50	5.9	45	6.0	50	6.1	45	6.2	50	6.3	45	6.4	50	6.5	45	6.6	50	6.7	45	6.8	50	6.9	45	7.0	50	7.1	45	7.2	50	7.3	45	7.4	50	7.5	45	7.6	50	7.7	45	7.8	50	7.9	45	8.0	50	8.1	45	8.2	50	8.3	45	8.4	50	8.5	45	8.6	50	8.7	45	8.8	50	8.9	45	9.0	50	9.1	45	9.2	50	9.3	45	9.4	50	9.5	45	9.6	50	9.7	45	9.8	50	9.9	45	10.0	50
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16(b)	

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17

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