



Cambridge International AS & A Level

CANDIDATE
NAME
CENTRE
NUMBER

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CANDIDATE
NUMBER

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MATHEMATICS

9709/52

Paper 5 Probability & Statistics 1

February/March 2025

1 hour 15 minutes

You must answer on the question paper.

You will need: List of formulae (MF19)

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- If additional space is needed, you should use the lined page at the end of this booklet; the question number or numbers must be clearly shown.
- You should use a calculator where appropriate.
- You must show all necessary working clearly; no marks will be given for unsupported answers from a calculator.
- Give non-exact numerical answers correct to 3 significant figures, or 1 decimal place for angles in degrees, unless a different level of accuracy is specified in the question.

INFORMATION

- The total mark for this paper is 50.
- The number of marks for each question or part question is shown in brackets [].

This document has **16** pages. Any blank pages are indicated.

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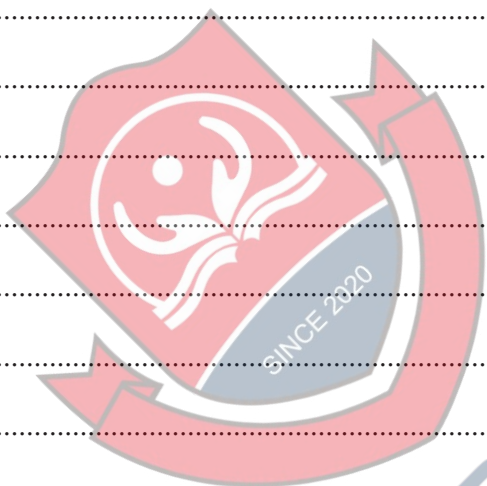
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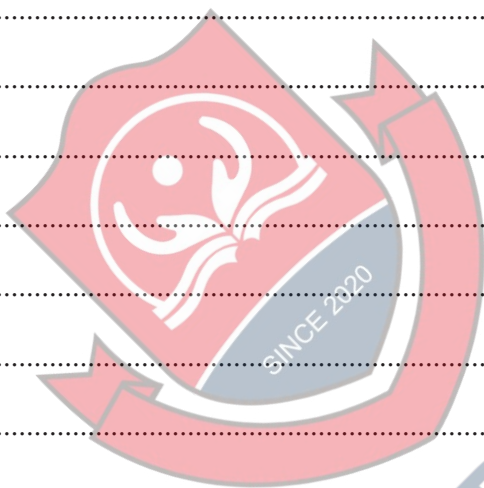
4Uadmis2



[2]



4Uadmission

The image features the University of Utah logo in the top left corner, which includes a red and white shield with a blue section containing the text 'SINCE 1890'. A large, light blue, diagonal watermark reading '4U admission' is overlaid across the entire page. The background is white with horizontal dotted lines.

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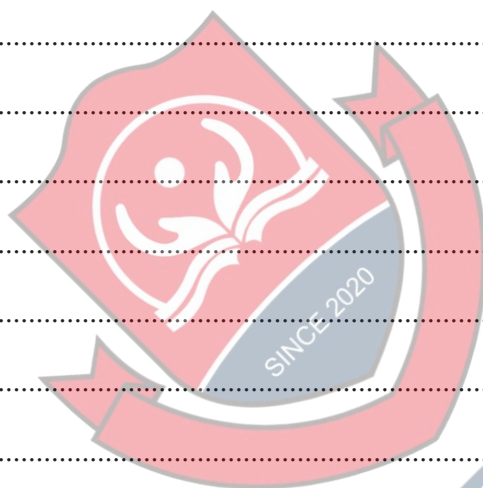
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4Uadmiss



(c) Use a suitable approximation to find the probability that more than 24 of these customers bought a computer made by company H . [5]

[5]

The image features the University of Alberta logo in the top left corner, which includes a stylized flower and the text 'SINCE 2020'. A large, diagonal watermark reading '4U admission' is overlaid across the entire page. The background is white with horizontal dotted lines.

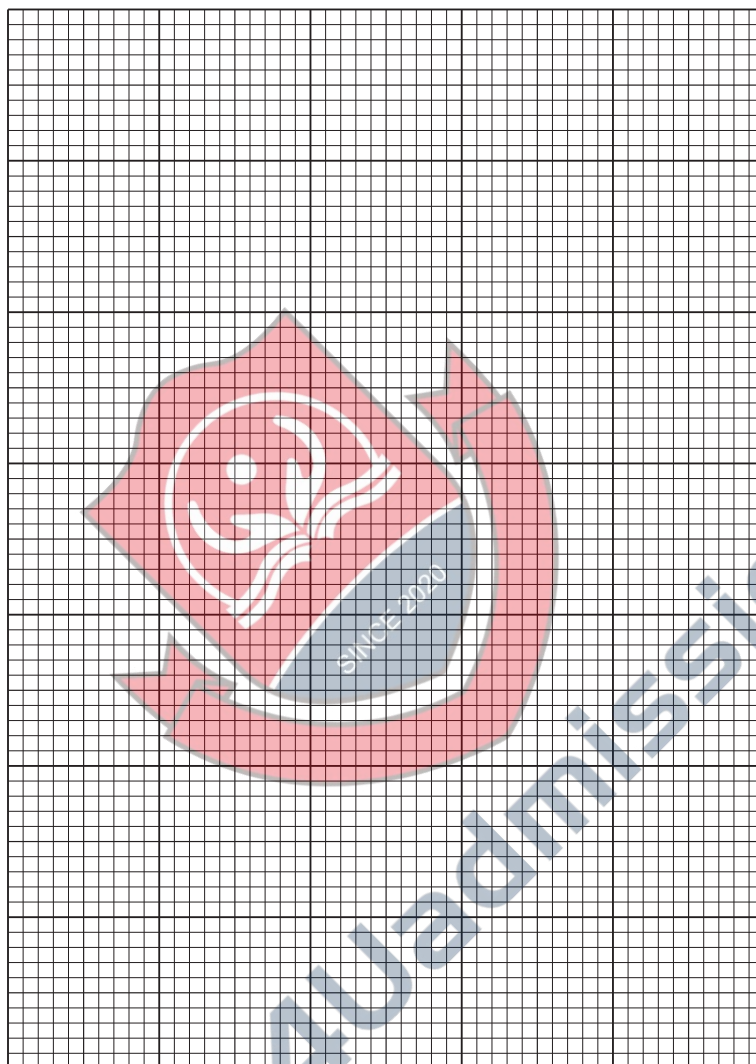


- 3 The lengths of 250 leaves of a certain type of plant are measured, correct to the nearest centimetre. The results are summarised in the table below.

Length (cm)	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 39
Frequency	18	28	60	72	48	24

- (a) On the grid below, draw a cumulative frequency graph to illustrate this information.

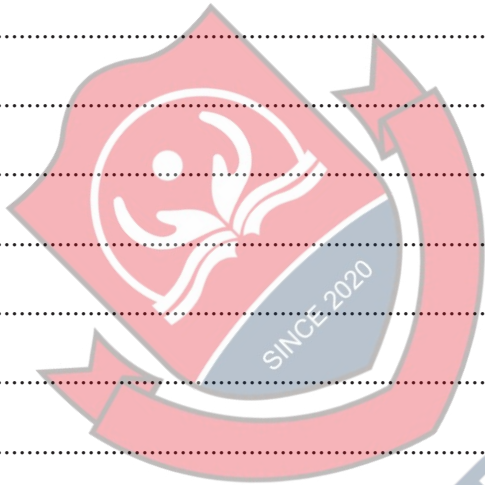
[4]



[2]

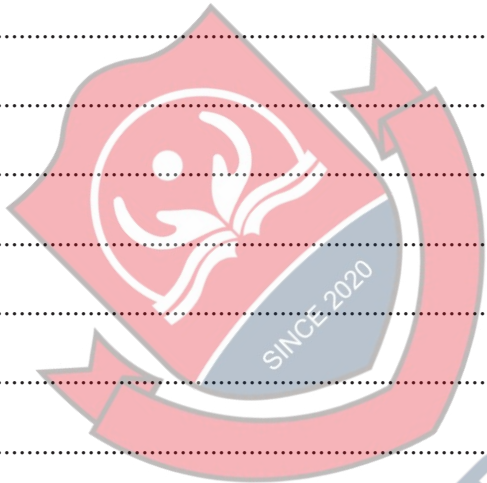
[3]

- [3]



4Uadmission



- 

- (a) Find the probability that the mass of peaches sold on any given day is between 56kg and 75kg. [3]



SINCE 2020

4Uadmission



(b) Find the value of σ . [3]

The supermarket is open 7 days a week.

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- [illegible]

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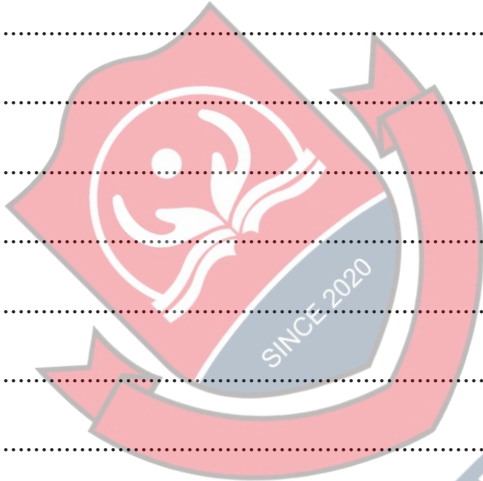
- gements are there of the 10 books in which the 3 books are **not** next to each other?

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4Uadmission



4Uadmission





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