

Paper Reference 1ST0/1H
Pearson Edexcel
Level 1/Level 2 GCSE (9–1)

Statistics
Paper 1
(Calculator)
Higher Tier

Thursday 13 June 2019 – Afternoon

Data Book

In the boxes below, write your name, centre number and candidate number.

| | | | | | |
|------------------|--|--|--|--|--|
| Surname | | | | | |
| Other names | | | | | |
| Centre Number | | | | | |
| Candidate Number | | | | | |

INSTRUCTIONS

There may be spare copies of some data sheets in case you need them.

**THIS DATA BOOK *MUST* BE RETURNED WITH THE
QUESTION PAPER AT THE END OF THE EXAMINATION.**

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Question 1

Key:

Number of children

9 or more

6-8

3-5

0-2

| | | | | |
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Question 1

Key:

Number of children

9 or more

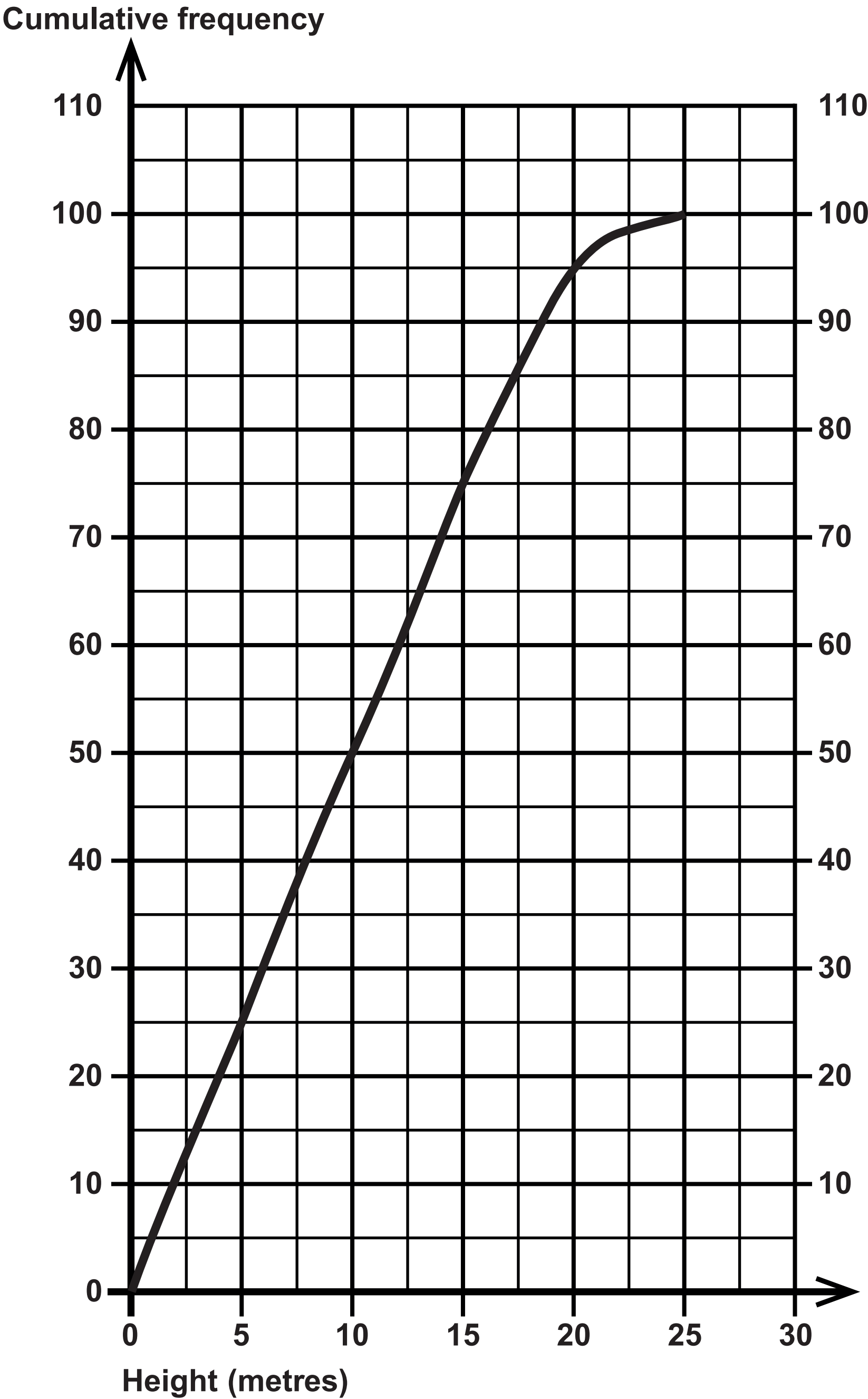
6-8

3-5

0-2

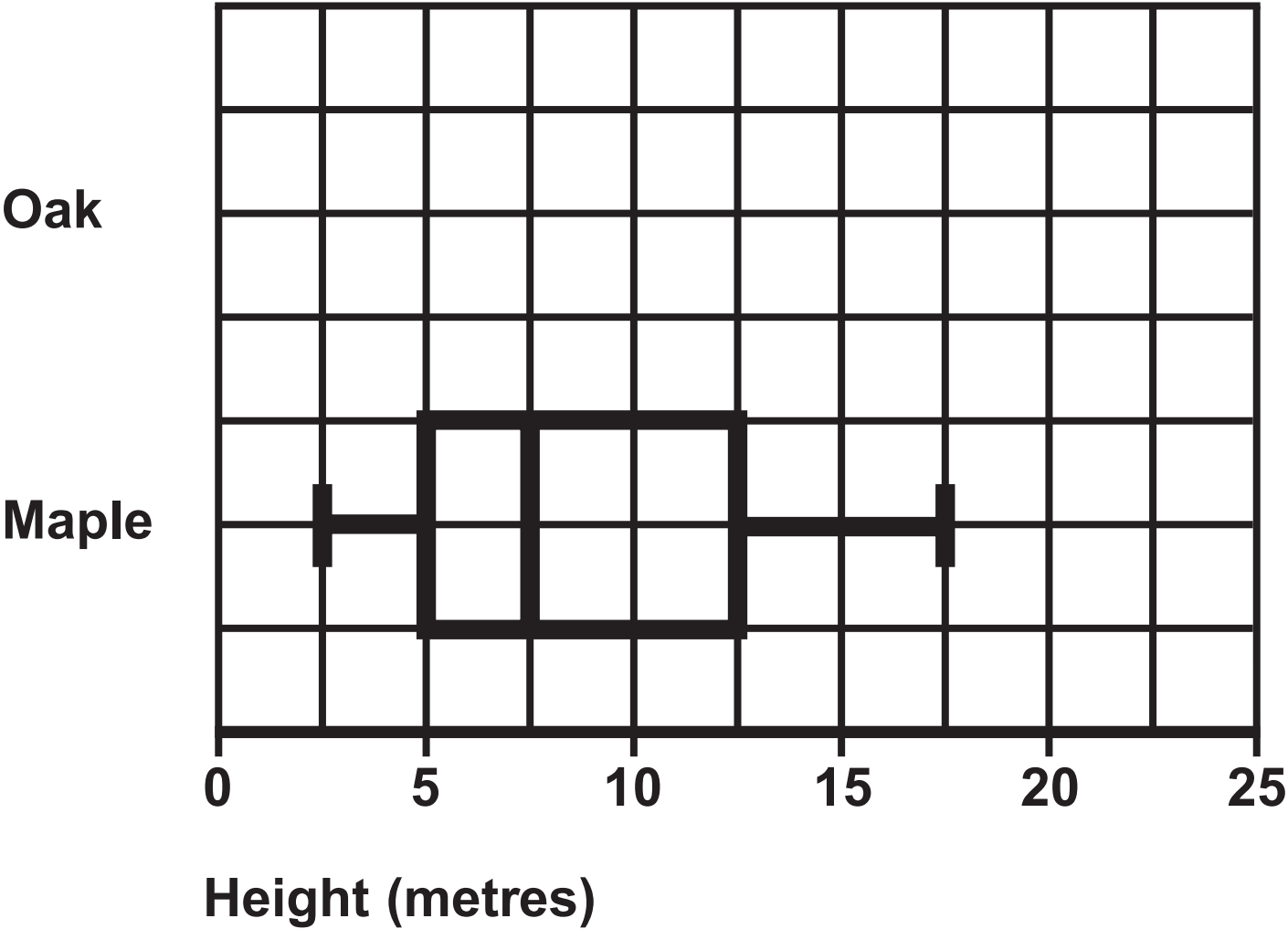
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Question 2

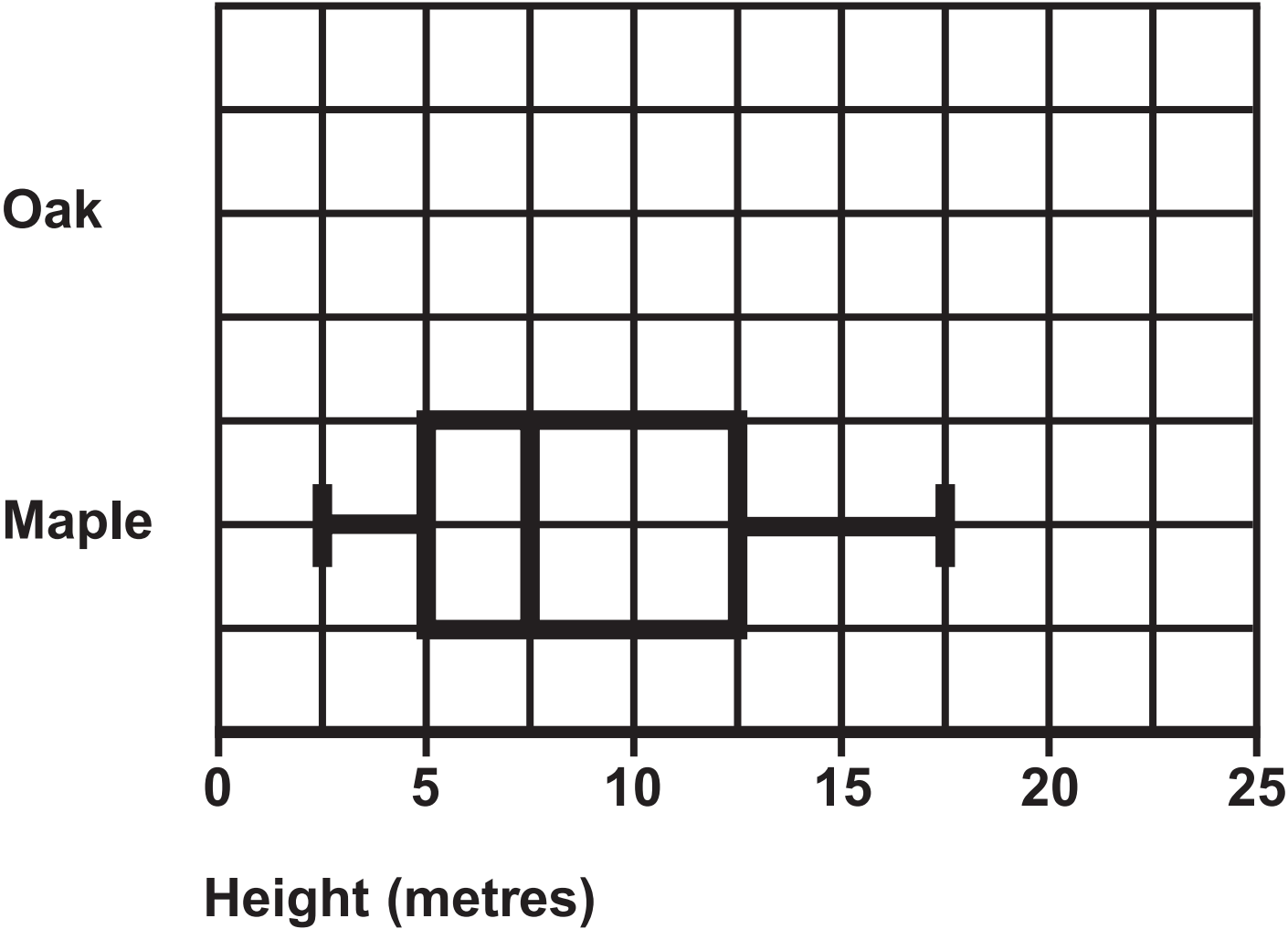


(Adapted from: opendata.camden.gov.uk)

Question 2(b)



Question 2(b)



Question 3

| Type of school | Applications in 2016 | | |
|--------------------|----------------------|--------|-------|
| | Gender | | Total |
| | Male | Female | |
| Maintained | 3674 | 2899 | 6573 |
| Independent | 1510 | 1268 | 2778 |
| Other and Overseas | 300 | 312 | 612 |
| Total | 5484 | 4479 | 9963 |

(Source: www.cam.ac.uk)

Question 5

| Variable | Type of variable | | |
|------------------------------|------------------|----------|------------|
| | Explanatory | Response | Extraneous |
| Age | | | |
| Left/Right handedness | | | |
| Gender | | | |
| Number of objects remembered | | | |

Question 5

| Variable | Type of variable | | |
|------------------------------|------------------|----------|------------|
| | Explanatory | Response | Extraneous |
| Age | | | |
| Left/Right handedness | | | |
| Gender | | | |
| Number of objects remembered | | | |

Question 6

Table 1

| Caribbean island | Crude birth rate | Crude death rate |
|------------------|------------------|------------------|
| Barbados | 11·995 | 10·661 |
| Saint Lucia | 12·239 | 7·472 |

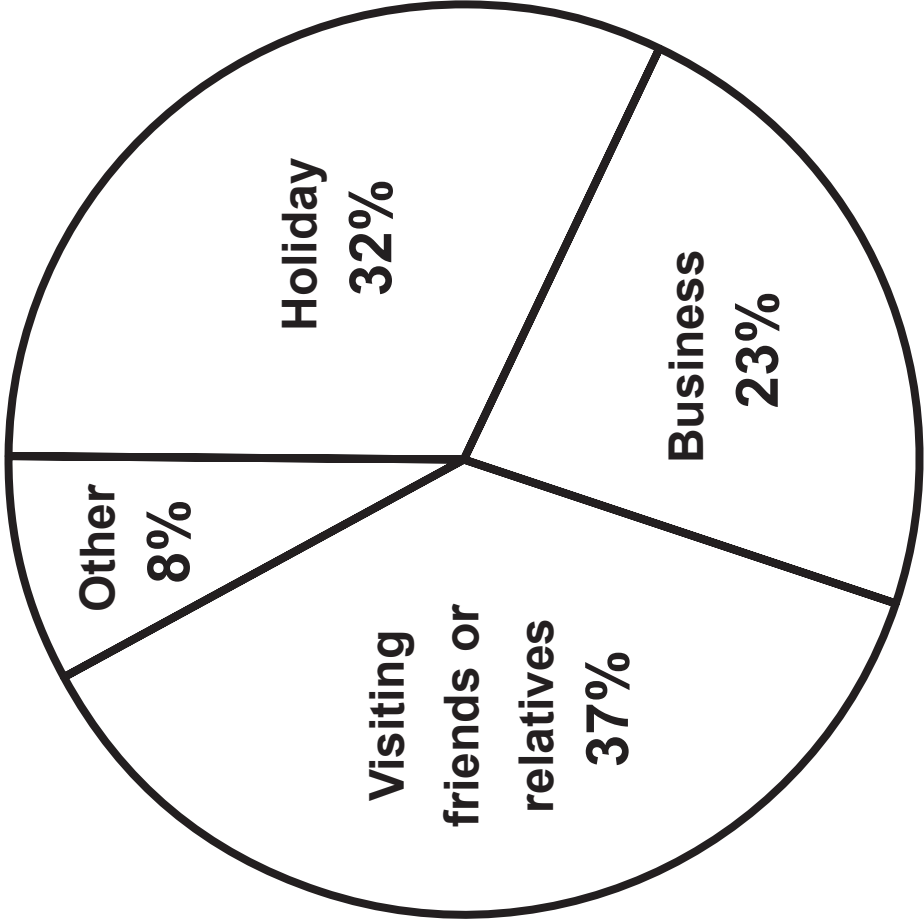
(Source: www.data.worldbank.org)

Table 2

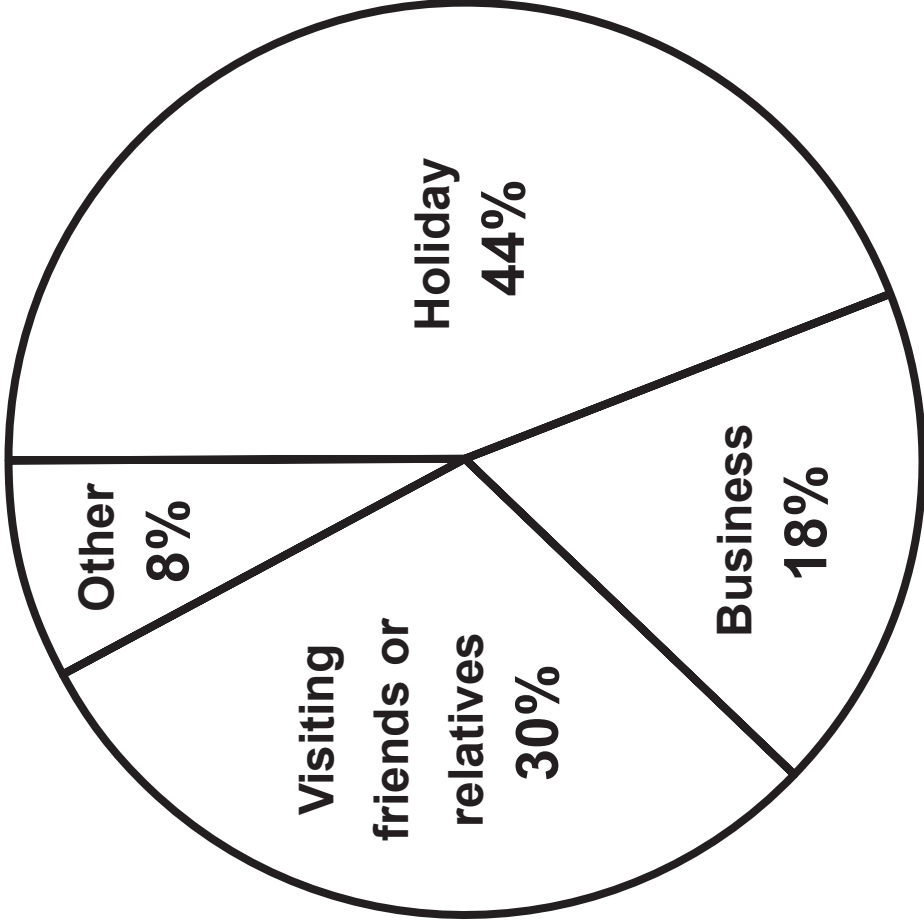
| Age Group | Standard population | |
|-------------|---------------------|-------------|
| | Barbados | Saint Lucia |
| 60 to 69 | 103 | 64 |
| 70 to 79 | 61 | 39 |
| 80 and over | 34 | 22 |

Question 7

January 2017



July 2017



(Source: www.ons.gov.uk)

Question 7(c)

| Month | Total number of visitors (thousands) |
|--------------|---|
| January 2017 | 2931 |
| July 2017 | 4020 |

Question 8

| Weight (kg) for Boys (B) and Girls (G) | | | | | | | | |
|--|------------|------|------|-----|------|------|------|------|
| Age (months) | Percentile | | | | | | | |
| | 9th | | 25th | | 50th | | 91st | |
| | B | G | B | G | B | G | B | G |
| 3 | 5.45 | 4.9 | 5.9 | 5.4 | 6.2 | 5.85 | 7.35 | 6.9 |
| 4 | 6.1 | 5.45 | 6.5 | 5.9 | 7 | 6.4 | 8.15 | 7.6 |
| 5 | 6.5 | 5.9 | 7 | 6.4 | 7.5 | 6.9 | 8.7 | 8.25 |
| 6 | 6.8 | 6.2 | 7.4 | 6.7 | 7.9 | 7.5 | 9.2 | 8.6 |

(Source adapted from: www.rcpch.ac.uk)

Question 9

Giovani goes to the region of Ontario, captures a sample of **250** reindeer, attaches a tag to each reindeer and then releases the **250** reindeer back into the same region of Ontario.

Three days later, Giovani returns to the same region of Ontario and catches a sample of **98** reindeer.

He finds that **5** of these reindeer are tagged.

Giovani concludes that this information can be used to verify the estimate of **5000**

Question 10

| Time spent on social media (t minutes) | Frequency |
|---|-----------|
| $0 \leq t < 50$ | 1 |
| $50 \leq t < 100$ | 4 |
| $100 \leq t < 150$ | 8 |
| $150 \leq t < 200$ | 17 |
| $200 \leq t < 300$ | 16 |

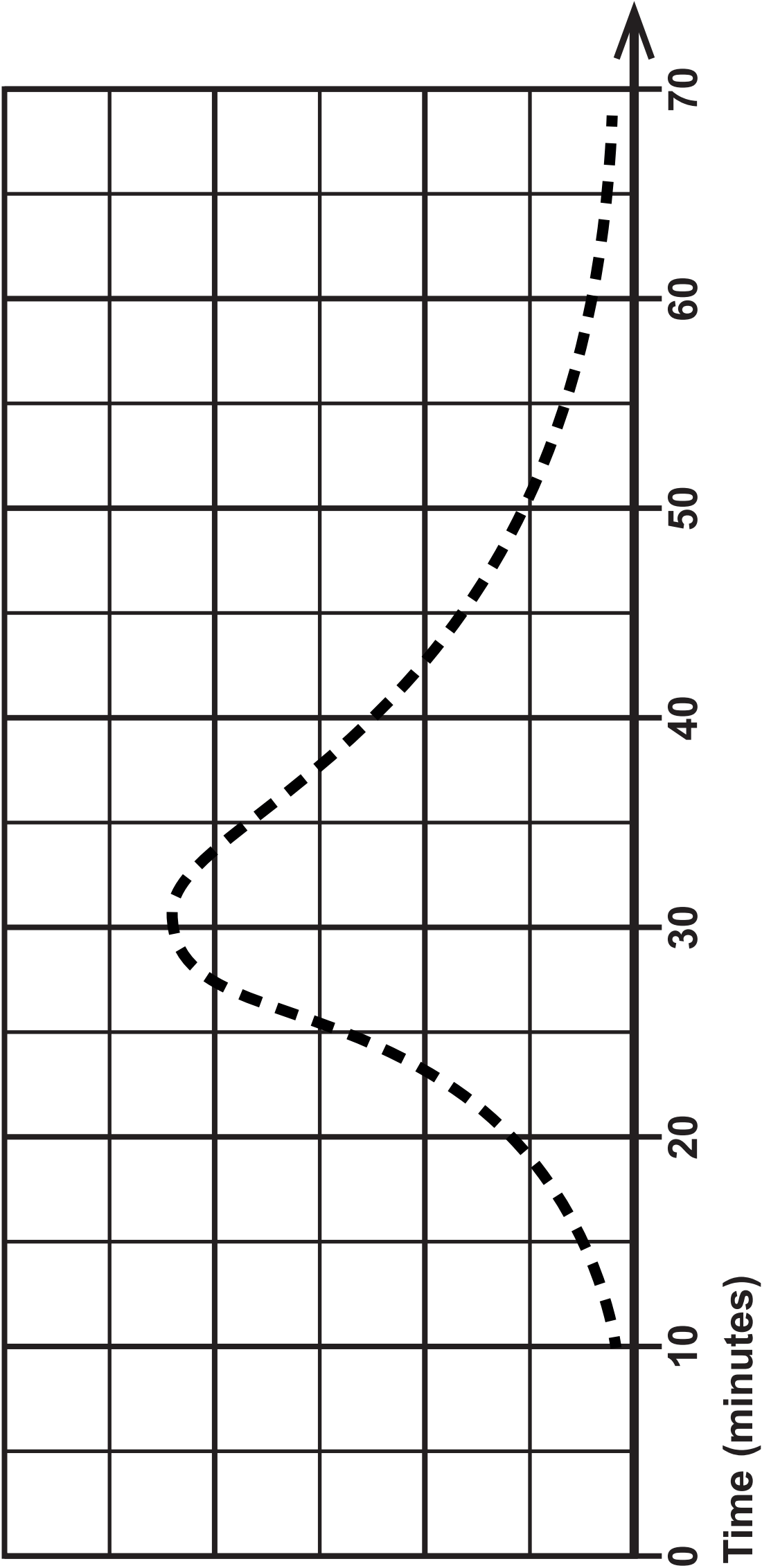
Question 10(b)

| Mean (minutes) | Standard deviation (minutes) | Median (minutes) |
|-------------------|---------------------------------|---------------------|
| 125 | 25 | 130 |

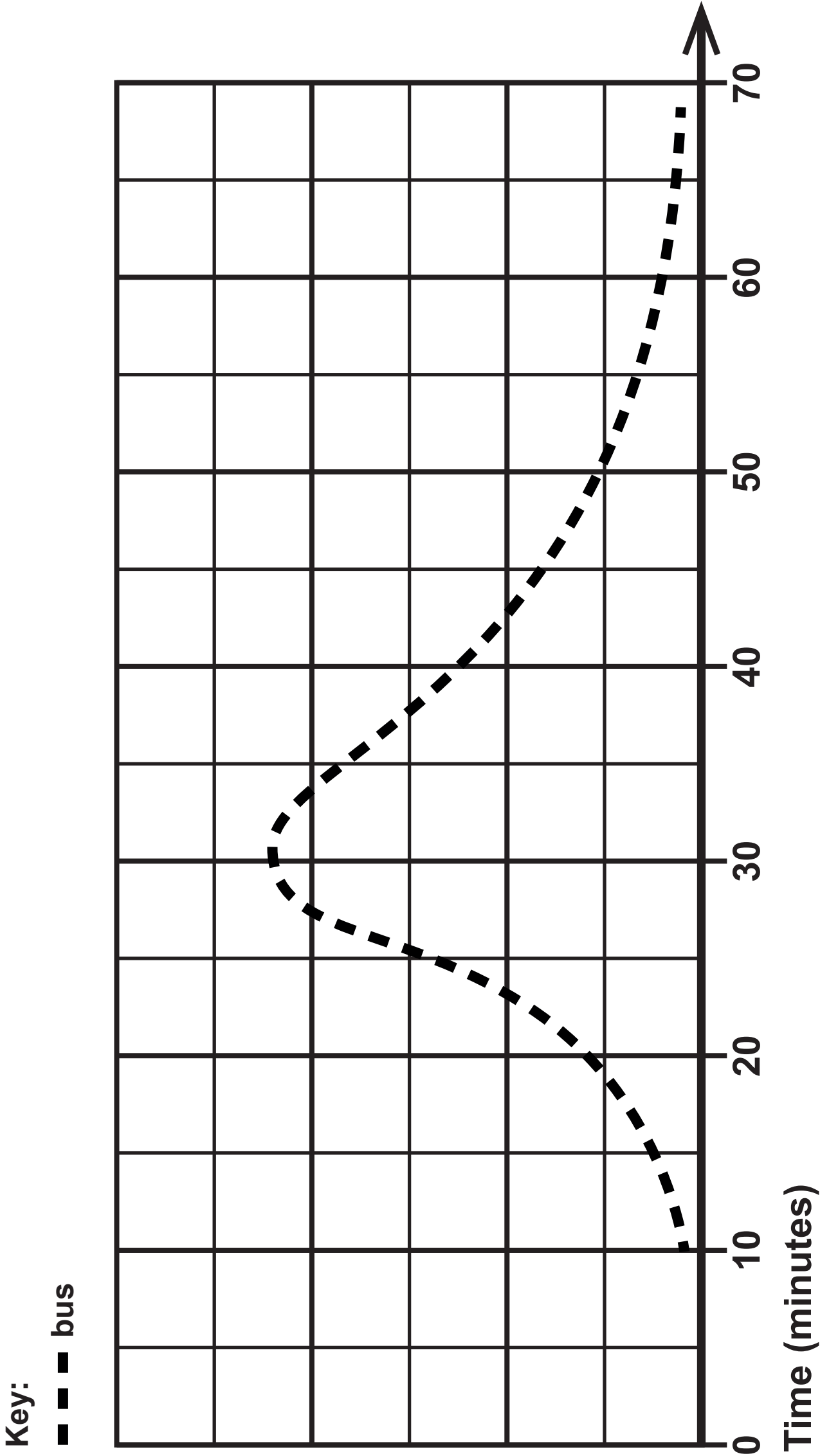
Question 11(b)

Key:

■ ■ bus



Question 11(b)



Question 12

| Class | Number of students in the class | Class mean mark |
|-------|------------------------------------|--------------------|
| A | 28 | 63 |
| B | 32 | 72 |
| C | n | 55 |

Question 12(c)

The three classes have also taken a mathematics test.

Mr Singh thinks that there is a relationship between the science marks and the mathematics marks.

He draws a scatter diagram for each of the three classes.

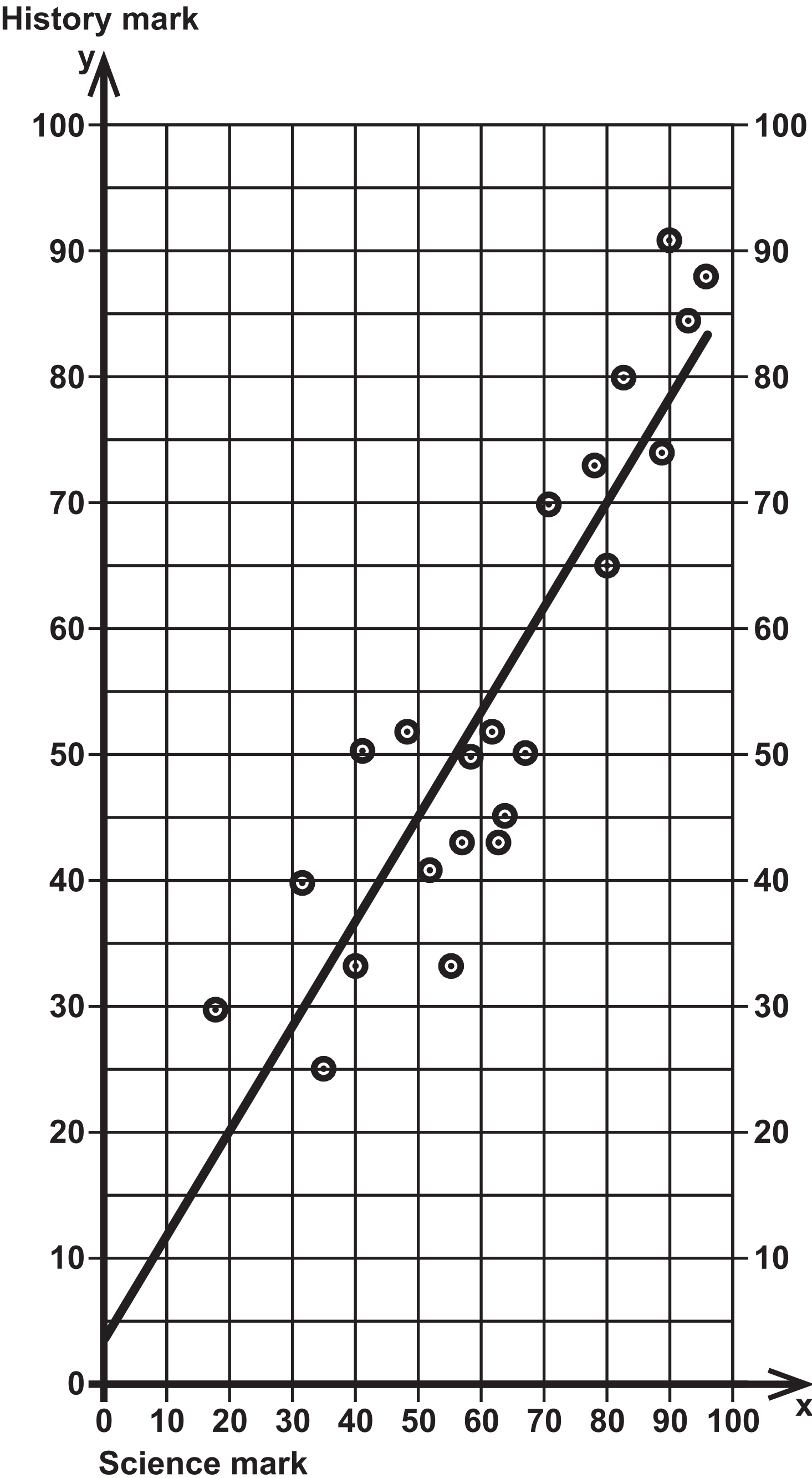
For each diagram, he used the science mark, x , for each student in the class as the explanatory variable and the corresponding mathematics mark, m , as the response variable.

Mr Singh then used statistical software to find the equation of the regression line for the data in each scatter diagram.

Here are the equations.

| Class | Equation of regression line |
|-------|-----------------------------|
| A | $m = 1.4x - 1$ |
| B | $m = 1.2x + 5$ |
| C | $m = -1.3x + 4$ |

Question 12(d)



Question 13

Roll a fair dice.

If you get 1, 2, 3 or 4 tick box **A**

If you get 5 or 6 answer this question.

Have you ever taken a sick day off work when you weren't really sick?

If yes, tick box **A**

If no, tick box **B**

A ☐ **B** ☐