

GCSE Grade 6

Maths

Booklet 2

Paper 1H

Non-Calculator

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- 1 The table shows some information about the profit made each day at a cricket club on 100 days.

Profit (£ x)	Frequency
$0 \leq x < 50$	10
$50 \leq x < 100$	15
$100 \leq x < 150$	25
$150 \leq x < 200$	30
$200 \leq x < 250$	5
$250 \leq x < 300$	15

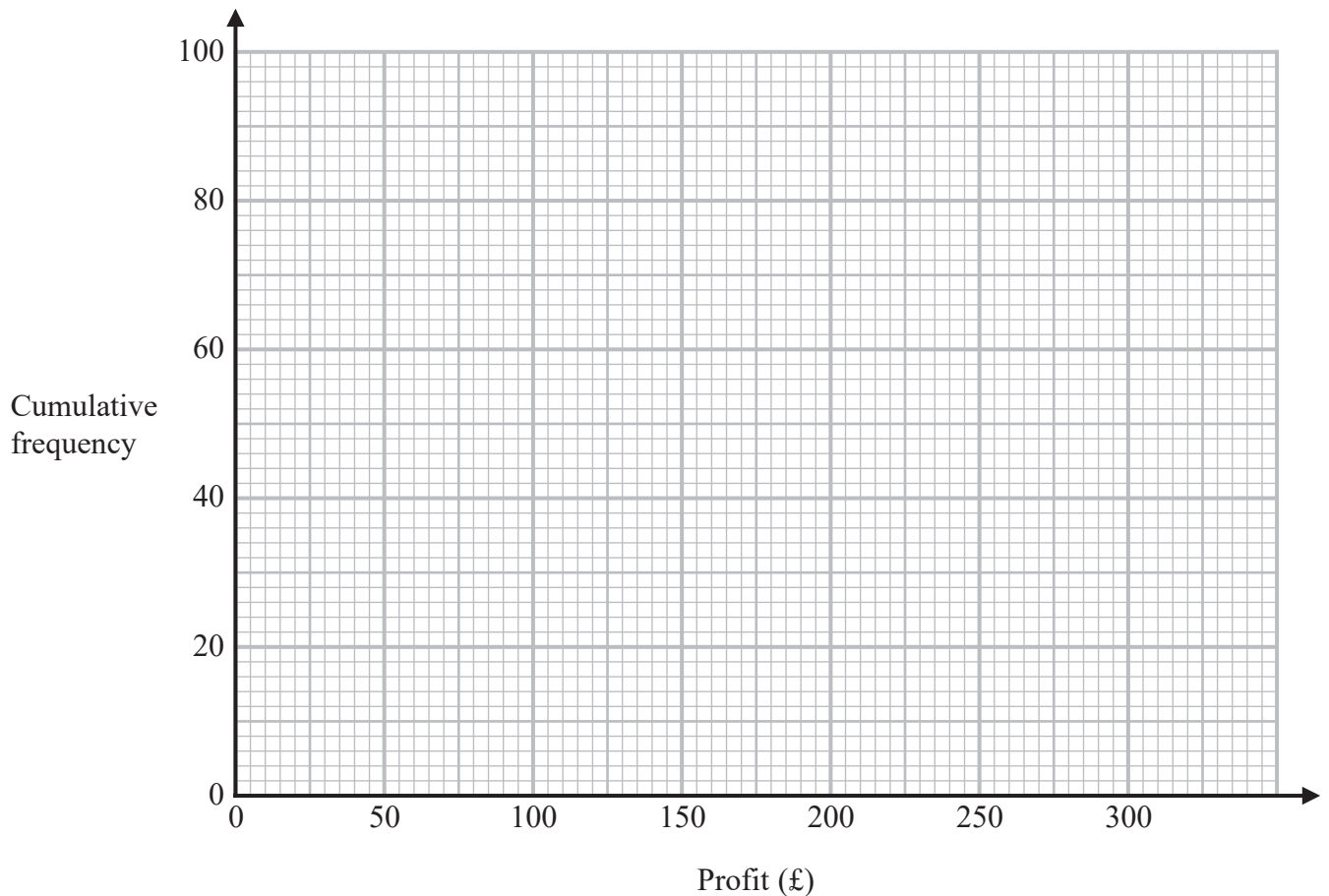
- (a) Complete the cumulative frequency table.

Profit (£ x)	Cumulative frequency
$0 \leq x < 50$	
$0 \leq x < 100$	
$0 \leq x < 150$	
$0 \leq x < 200$	
$0 \leq x < 250$	
$0 \leq x < 300$	

(1)



(b) On the grid, draw a cumulative frequency graph for this information.



(2)

(c) Use your graph to find an estimate for the number of days on which the profit was less than £125

..... days
(1)

(d) Use your graph to find an estimate for the interquartile range.

£.....
(2)

(Total for Question 1 is 6 marks)



- 2 Cormac has some sweets in a bag.

The sweets are lime flavoured or strawberry flavoured or orange flavoured.

In the bag

$$\begin{array}{l} \text{number of lime} \\ \text{flavoured sweets} \end{array} : \begin{array}{l} \text{number of strawberry} \\ \text{flavoured sweets} \end{array} : \begin{array}{l} \text{number of orange} \\ \text{flavoured sweets} \end{array} = 9 : 4 : x$$

Cormac is going to take at random a sweet from the bag.

The probability that he takes a lime flavoured sweet is $\frac{3}{7}$

Work out the value of x .

$$x = \dots\dots\dots$$

(Total for Question 2 is 3 marks)



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- 3 Express $0.1\dot{1}\dot{7}$ as a fraction.
You must show all your working.

(Total for Question 3 is 3 marks)



P 6 6 3 0 5 A 0 1 3 2 4

- 4 (a) Write down the value of $100^{\frac{1}{2}}$

.....
(1)

- (b) Find the value of $125^{\frac{2}{3}}$

.....
(2)

(Total for Question 4 is 3 marks)

- 5 3 teas and 2 coffees have a total cost of £7.80
5 teas and 4 coffees have a total cost of £14.20

Work out the cost of one tea and the cost of one coffee.

tea £.....

coffee £.....

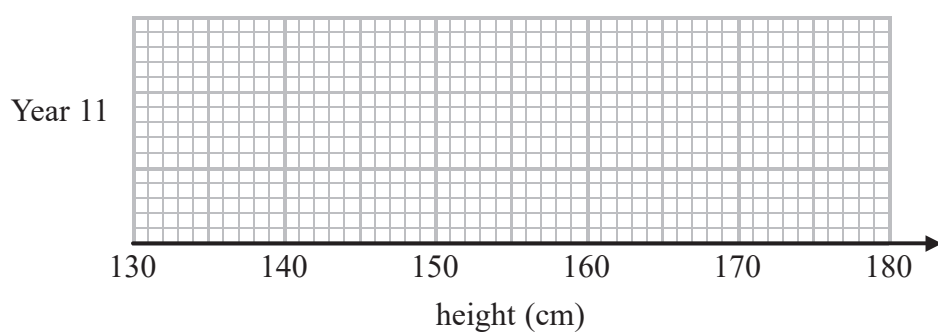
(Total for Question 5 is 4 marks)



6 The table shows information about the heights, in cm, of a group of Year 11 girls.

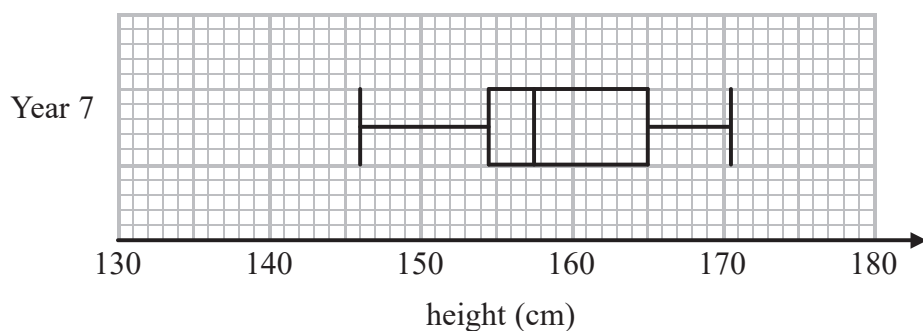
	height (cm)
least height	154
median	165
lower quartile	161
interquartile range	7
range	20

(a) Draw a box plot for this information.



(3)

The box plot below shows information about the heights, in cm, of a group of Year 7 girls.



(b) Compare the distribution of heights of the Year 7 girls with the distribution of heights of the Year 11 girls.

(2)

(Total for Question 6 is 5 marks)



7 Given that $\frac{a}{b} = \frac{2}{5}$ and $\frac{b}{c} = \frac{3}{4}$

find $a:b:c$

(Total for Question 7 is 3 marks)

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8 (a) Find the value of $\sqrt[4]{81 \times 10^8}$

.....
(2)

(b) Find the value of $64^{-\frac{1}{2}}$

.....
(2)

(c) Write $\frac{3^n}{9^{n-1}}$ as a power of 3

.....
(2)

(Total for Question 8 is 6 marks)



9 The table gives information about the weekly wages of 80 people.

Wage (£ w)	Frequency
$200 < w \leq 250$	5
$250 < w \leq 300$	10
$300 < w \leq 350$	20
$350 < w \leq 400$	20
$400 < w \leq 450$	15
$450 < w \leq 500$	10

(a) Complete the cumulative frequency table.

Wage (£ w)	Cumulative frequency
$200 < w \leq 250$	
$200 < w \leq 300$	
$200 < w \leq 350$	
$200 < w \leq 400$	
$200 < w \leq 450$	
$200 < w \leq 500$	

(1)

(b) On the grid opposite, draw a cumulative frequency graph for your completed table.

(2)

Juan says

“60% of this group of people have a weekly wage of £360 or less.”

(c) Is Juan correct?

You must show how you get your answer.

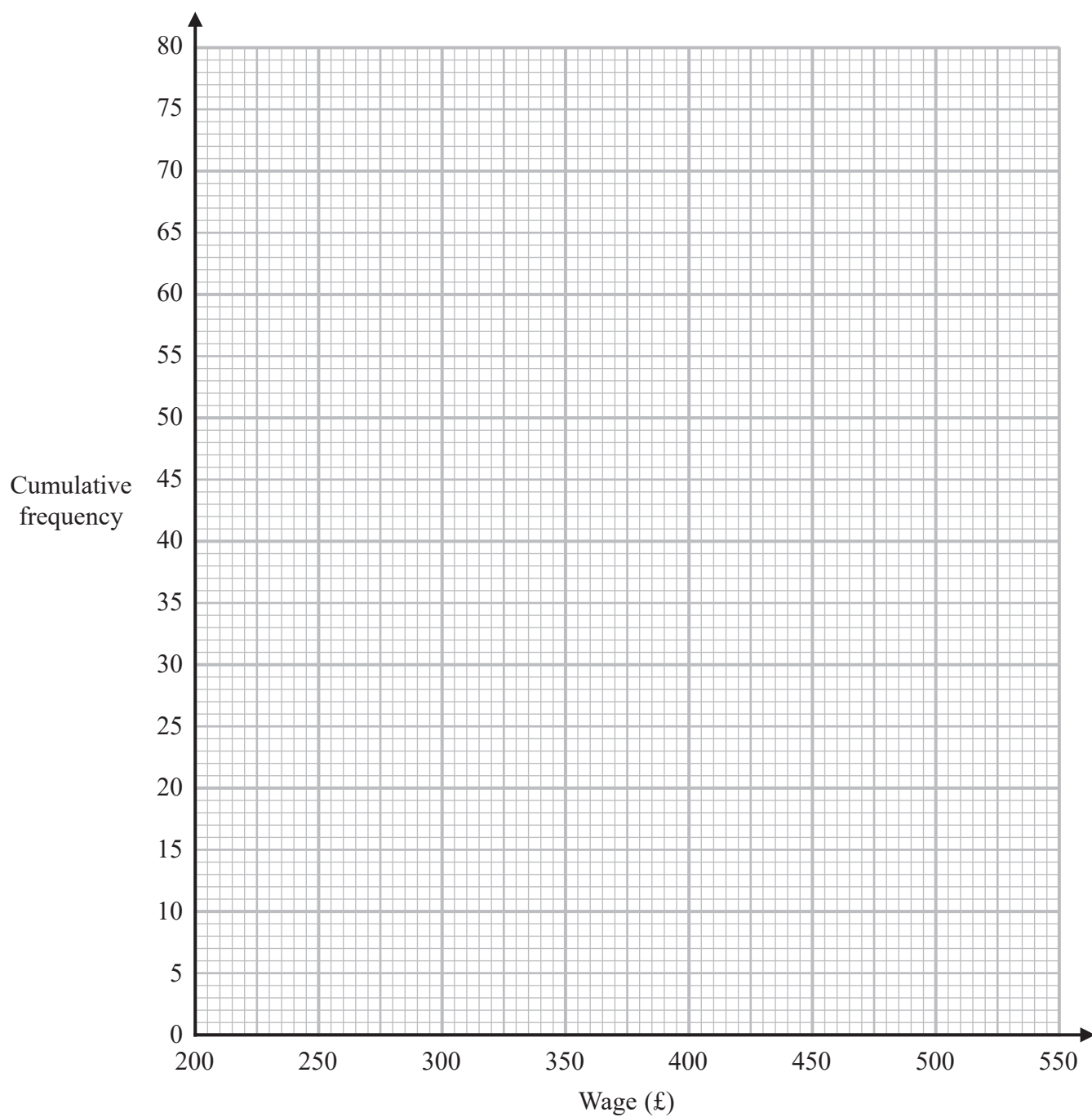
(3)



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(Total for Question 9 is 6 marks)



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