## 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.

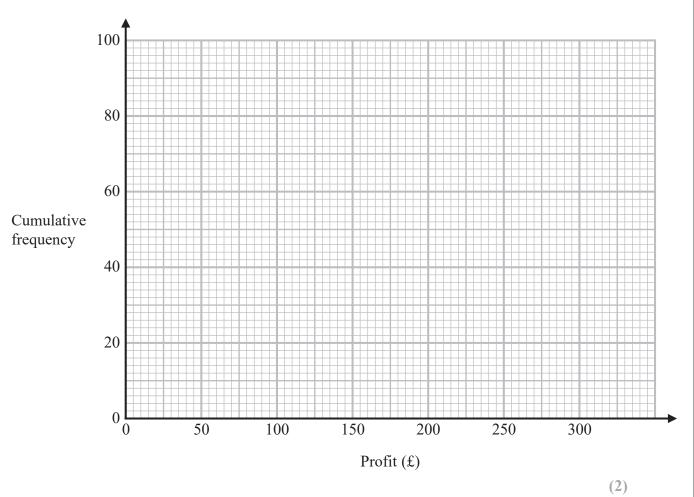
Profit (£x)	Frequency
$0 \leqslant x < 50$	10
$50 \leqslant x < 100$	15
$100 \leqslant x < 150$	25
$150 \leqslant x < 200$	30
$200 \leqslant x < 250$	5
$250 \leqslant x < 300$	15

(a) Complete the cumulative frequency table.

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

(1)

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



(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

number of lime flavoured sweets : number of strawberry flavoured sweets : number of orange flavoured sweets :  $\frac{1}{1}$  number of orange flavoured sweets = 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* = .....

(Total for Question 2 is 3 marks)

3 Express 0.117 as a fraction. You must show all your working.

(Total for Question 3 is 3 marks)

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

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

(1)

(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 £

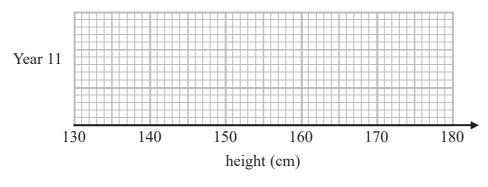
coffee £

(Total for Question 5 is 4 marks)

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

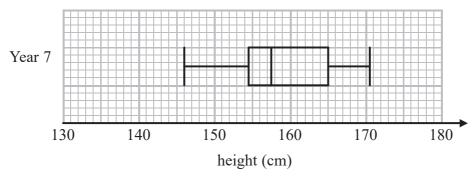
	height (cm)
least height	154
median	165
lower quartile	161
interquartile range	7
range	20

(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)

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

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

(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
$200 < w \leqslant 250$	5
$250 < w \leqslant 300$	10
$300 < w \leqslant 350$	20
$350 < w \leqslant 400$	20
$400 < w \leqslant 450$	15
$450 < w \leqslant 500$	10

(a) Complete the cumulative frequency table.

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

(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)

