

Core Maths - Summer Homework

NAME:

1. Chloe made a list of her homework marks.

5 6 6 6 5 4 3 2 5 6

(a) Write down the mode of her homework marks.

.....
(1)

(b) Work out her mean homework mark.

.....
(2)

(Total 3 marks)

2. The probability that a biased dice will land on a four is 0.3

Pam is going to roll the dice 200 times.

Work out an estimate for the number of times the dice will land on a four.

.....
(Total 1 mark)

3. In a survey, some families were asked to name their favourite supermarket. Some of the results are shown in the diagram.



(a) Write as a **fraction** the percentage whose favourite supermarket was Gateshead.

.....
(1)

(b) Write as a **decimal** the percentage whose favourite supermarket was Broadway.

.....
(1)

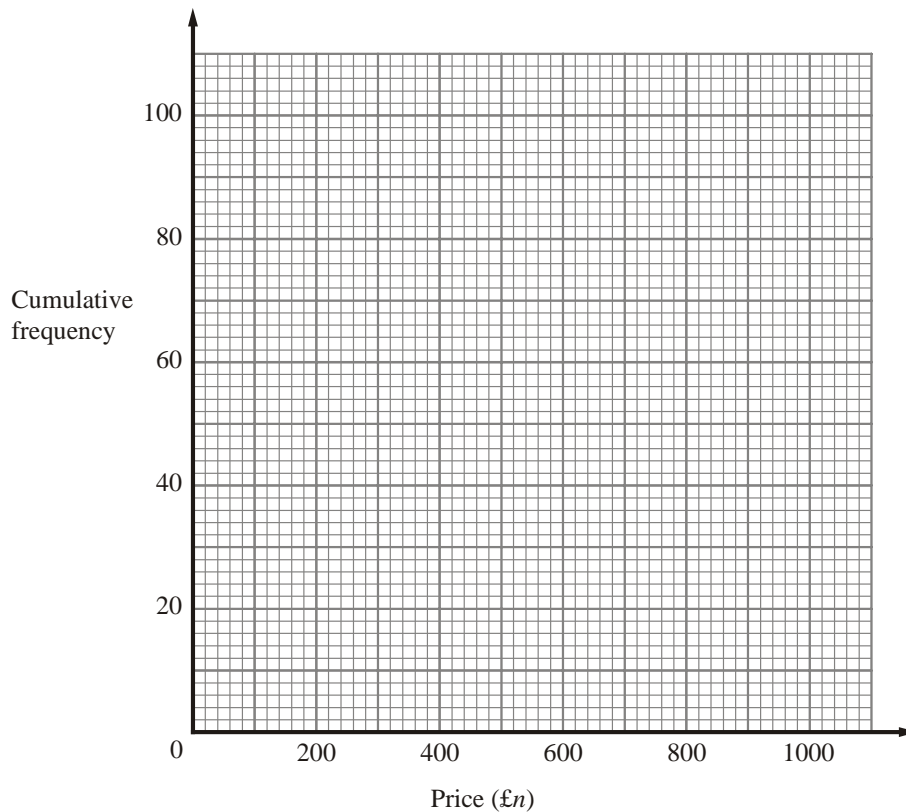
(c) Calculate 47% of £5600

.....
(1)
(Total 3 marks)

4. The **cumulative frequency** table shows information about the prices, in £, of 100 televisions.

Price (£ n)	Cumulative frequency
$0 < n \leq 200$	6
$0 < n \leq 400$	21
$0 < n \leq 600$	39
$0 < n \leq 800$	76
$0 < n \leq 1000$	100

(a) On the grid below, draw a cumulative frequency graph for the table.



(2)

(b) Use your graph to find an estimate for the median price of these televisions.

£

(1)

(Total 3 marks)

5. Emma repairs bicycles.
She keeps records of the cost of the repairs.

The table gives information about the costs of all repairs which she carried out in one week.

Cost (£ C)	Frequency
$0 < C < 10$	4
$10 < C < 20$	6
$20 < C < 30$	8
$30 < C < 40$	6
$40 < C < 50$	10

Find the class interval in which the median lies.

.....
(Total 2 marks)

6. There are 900 students at Prestfield School.

55% of these 900 students are girls.

- (a) Work out 55% of 900

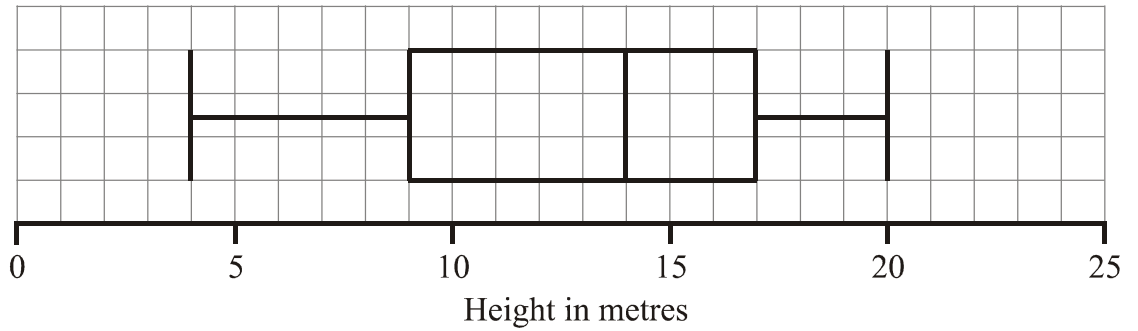
.....
(1)

There are 186 students in Year 10.

- (b) Write 186 out of 900 as a percentage.

.....%
(1)
(Total 2 marks)

7. The box plot gives information about the distribution of the heights of all the trees in a wood.



- (a) Write down the Lower quartile height of the trees.

..... m
(1)

- (b) Work out the interquartile range of the heights of the trees.

..... m
(1)

There are 400 trees in the wood.

- (c) Work out the number of trees in the wood with a height of 17 m or more.

.....
(2)
(Total 4 marks)

8. 60 British students each visited one foreign country last week. The two-way table shows some information about these students.

	France	Germany	Spain	Total
Female			9	34
Male	15			
Total		25	18	60

(a) Complete the two-way table.

(2)

One of these students is picked at random.

(b) Write down the probability that the student visited Spain last week.

.....
(2)
(Total 4 marks)

9. Amanda collected 20 leaves and wrote down their lengths, in cm.

Here are her results.

6 7 6 3 5 6 8 8 6 5
7 6 4 3 5 7 6 4 8 5

(a) Complete the frequency table to show Amanda's results.

Length in cm	Tally	Frequency
2		
3		
4		
5		
6		
7		
8		

(2)

(b) Write down the modal length.

.....cm
(1)

(c) Work out the range.

.....cm
(1)

(d) Work out the mean length of leaves.

.....cm
(3)

(Total 7 marks)

10. Mary recorded the heights, in centimetres, of the girls in her class.

She put the heights in order.

133	145	151	153	161	163	163	168
168	171	173	178	182	183	183	

(a) Find

(i) the lower quartile,

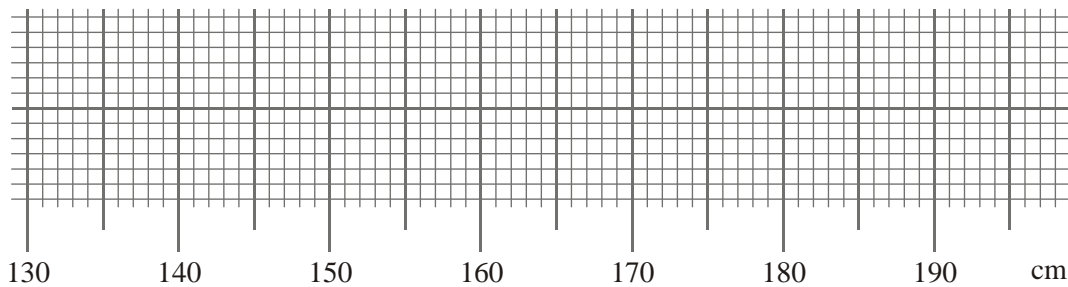
..... cm

(ii) the upper quartile.

..... cm

(2)

(b) On the grid, draw a box plot for this data.



(3)

(Total 5 marks)