



2

Here is some information about the masses, in kilograms, of 40 cows in a field.

Mass, <i>m</i> , (kg)	Frequency
$0 < m \leq 200$	6
$200 < m \leq 400$	8
$400 < m \le 600$	15
$600 < m \le 800$	11

Mass	C. Frequency
m ≤ 200	6
m ≤ 400	14
m ≤600	29
m ≤ 800	40

2 (a) Draw a cumulative frequency graph.

[3 marks]



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2 (b)	Use your graph to estimate the median mass of the 40 cows.	[1 mark]
	Answer 480	kg
2 (c)	Use your graph to estimate the interquartile range of masses of the 40	cows. [2 marks]
	620 - 300	
	Answer 320	kg
2 (d)	Cows that has a mass of less than 250 kg are considered small cows	-
_ (.,	Use your graph to find an estimate for the proportion of the cows in the that are small cows. $\frac{8 \text{ Small cows}}{40} = \frac{1}{5}$	field [2 marks]
	40 total cows	
	Answer 5	
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3

 Price (£x)
 Frequency
 \Pr
 $0 \le x < 10$ 35
 χ
 $10 \le x < 20$ 20
 χ
 $20 \le x < 30$ 13
 χ
 $30 \le x < 40$ 12
 χ
 $40 \le x < 50$ 14
 χ
 $50 \le x < 60$ 6
 χ

Price	C.Frequency
x ≤10	35
x < 20	55
x < 30	68
x ≤40	80
いく <50	94
x<60	001

3 (a) Draw a cumulative frequency graph.

[3 marks]



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Here is some information about the price of 100 items in a shop.

3 (b)	Use your graph to estimate the median price of the 100 i	items. [1 mark
	Answer £	0
3 (c)	Use your graph to estimate the interquartile range of pri 238.50 - 27.	ces of the 100 items. [2 marks
3 (d)	Answer £ 31.50 Chris has £23.00 One of the items is selected at random	
	Use your graph to estimate the probability that Chris car 59 items less than 100 items total	n afford to buy the item. [2 marks 1 23 00
	Answer 100	

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Here is some information about the times taken for 120 people to solve a maths problem.

Time, <i>t</i> , (seconds)	Frequency
$0 < t \le 20$	8
$20 < t \le 40$	24
$40 < t \le 60$	33
$60 < t \le 80$	30
80 < <i>t</i> ≤ 100	19
100 <i>< t</i> ≤ 120	6

Time
 C. Frequency

$$t \le 20$$
 8

 $t \le 40$
 32

 $t \le 60$
 65

 $t \le 80$
 95

 $t \le 100$
 114

 $t \le 120$
 120



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Draw a cumulative frequency graph.





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4 (b)	Use your graph to estimate the median time taken by the 120 people. [1 mark]
	Answer 57 seconds
4 (c)	Use your graph to estimate the interquartile range of times taken to solve the maths problem. [2 marks]
	77-38
	Answer 39
4 (d)	Everyone who solved the problem in less than 25 seconds wins a prize. Use your graph to find an estimate for the percentage of people that won a prize. [2 marks]
	120 people total $\frac{14}{120} \times 100$ = 11.6%
	Answer
1 st	Turn over ▶

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The cumulative frequency diagram shows information about the masses, in grams, of the potatoes that a farmer harvests.

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The prices of different tickets are shown in the table below.

Child (18 years and under)	General Ticket	Senior (60 years and over)
£6.50	£9.50	£7.50

Use the graph to work out an estimate for the total amount of money the cinema receives in ticket sales for the showing of this film. [4 marks]

32 children 4 seniors 180 - 32 - 4 = 144 general $32 \times 6.50 + 4 \times 7.50 + 144 \times 9.50$ 1606 Answer £ 7 **1**st Turn over ►

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