

Question 1 - (2 marks available)

Complete the following sentences.

Data that can only take particular values is called _____ data.

Data that can take on any value is called _____ data.

Question 2 - (4 marks available)

Decide whether each of these sets of data is discrete or continuous.

- a) The number of buttons in a box
- b) The weight of sweets in a bag
- c) The volume of liquid in a bath
- d) The number of children at a swimming pool

Question 3 - (4 marks available)

The Richmond Park gamekeeper wanted to know how many deer were in the park.

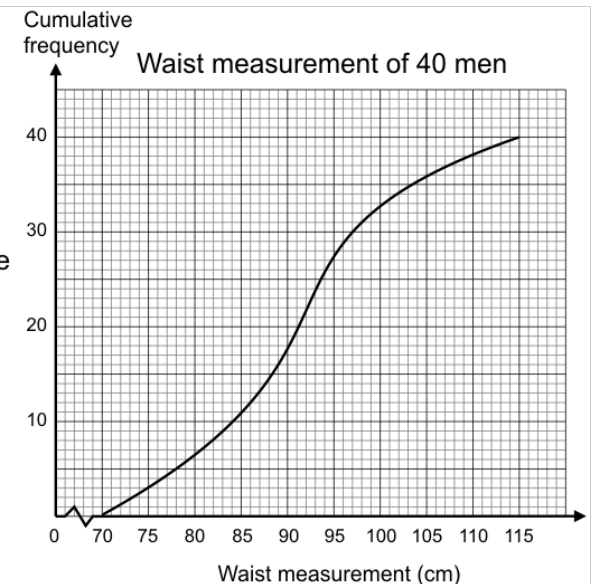
He caught 90 of them and put a small tag round a hoof of each of them. He then let the deer go back into the park.

The next week, the gamekeeper caught 70 deer. 10 of the deer had a tag around one of their hooves.

- a) Using this information, what estimate did the gamekeeper make for how many deer were in the park?
- b) Write down any one assumption he made.

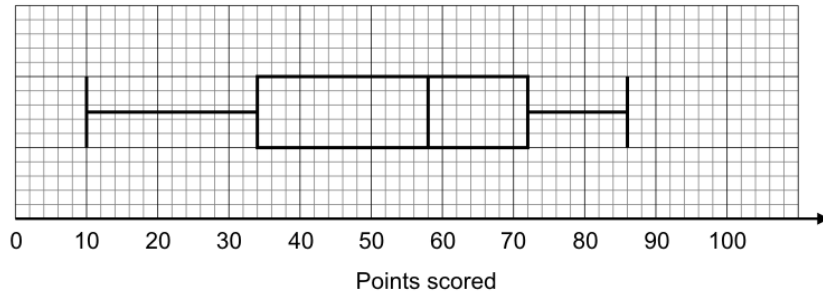
Question 4 - (4 marks available)

- a) How many men have a waist measurement of **more** than 85 cm?
- b) What is the median waist measurement?
- c) What is the interquartile range of the waist measurements?



Question 5 - (4 marks available)

This box plot shows information about the marks scored in a test.



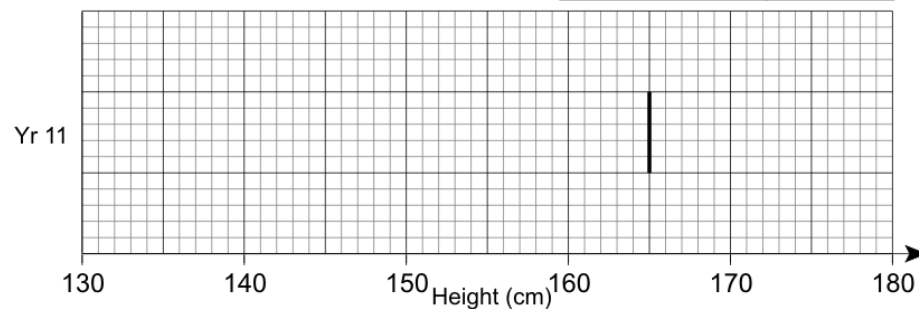
- What was the median number of marks scored?
- What was the interquartile range of the marks?
- What was the range of the marks?

Question 7 - (3 marks available)

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

	height (cm)
least height	143
median	165
lower quartile	159
interquartile range	8
range	33

Complete the boxplot for this information.

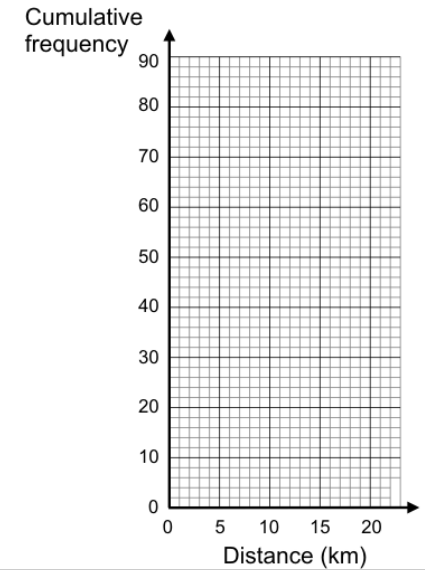


Question 6 - (4 marks available)

A local delivery company has a cumulative frequency table to show the distance it travels to deliver parcels.

Distance (km)	Cumulative frequency
$0 < d \leq 5$	8
$0 < d \leq 10$	30
$0 < d \leq 15$	70
$0 < d \leq 20$	80

- On the graph paper, draw a cumulative diagram to show this information. Join your crosses with straight lines.
- Use your diagram to estimate the median and the interquartile range of the delivery distances.

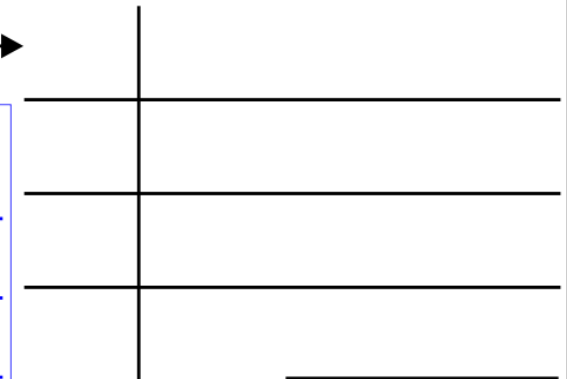
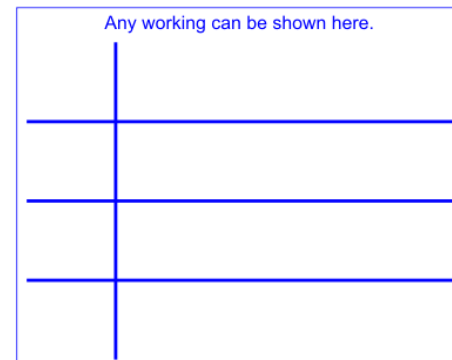


Question 8 - (3 marks available)

Here are the numbers of people in a restaurant on the first 15 days in July.

21, 30, 14, 23, 24, 38, 46, 33, 23, 27, 12, 42, 48, 44, 36

Show the data on an ordered stem and leaf diagram just here. →



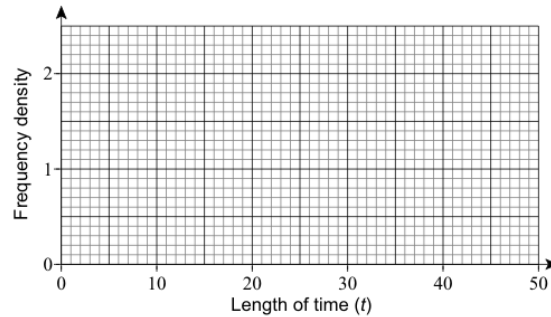
Key:
1|2 means

Question 9 - (4 marks available)

The table shows information about the lengths of time, in minutes, it took some pupils to do their maths homework last week.

Length of time (t)	Frequency
$0 \leq t < 10$	5
$10 \leq t < 25$	24
$25 \leq t < 30$	12
$30 \leq t < 50$	8

Draw a histogram for the information in the table.



Question 10 - (2 marks available)

The formula for the cost of buying a car is:
cost = $12 \times$ **monthly payment** + **deposit**

- a) Find the **cost** of a car when the **monthly payment** is £350 and the **deposit** is £2 000.
- b) The **cost** of another car is £8 000.
Find the **monthly payment** when the **deposit** is £2 600.

Question 11 - (5 marks available)

David drove a distance (d) of 187 km, correct to 3 significant figures.
He used 28 litres of petrol (p), correct to 2 significant figures.

The petrol consumption (c) of a car, in km per litre, is given by the formula

$$c = \frac{d}{p}$$

By considering bounds, work out the value of c for David's journey to a suitable degree of accuracy.

You must show all your working and give a reason for your final answer.

Question 12 - (2 marks available)

A store employs 11 women and 12 men.

What percentage of the employees are men?
Give your answer to 1 decimal place.

Question 13 - (2 marks available)

The “off-peak” weekly average cost of hiring a caravan in Wales is £520.
In July the average cost increases to £800.

Calculate the percentage increase in cost.
Give your answer to 2 significant figures.

Question 14 - (2 marks available)

The price of a new car was £12 500
It is reduced to £11 625

Work out the percentage reduction.

Question 15 - (2 marks available)

Billy buys a fridge.

VAT at the rate of 20% is applied to the price of the fridge.
Billy pays a total price of £480 for the fridge.

Work out the price of the fridge before the VAT is added.

Question 16 - (3 marks available)

If £2000 is placed into a bank account that pays 3% compound interest per year,
how much will be in the account after 2 years?

Question 17 - (4 marks available)

Ellie buys a mobile phone in Spain for € 352.50.
Her brother Jack buys an identical phone in Japan for ¥ 39 856 (Japanese Yen).

Using the exchange rates below

$$£1 = € 1.41$$

$$£1 = ¥ 188$$

a) Decide in which country is the mobile phone cheaper.

b) Work out by how much (in £).

Question 18 - (5 marks available)

Mr and Mrs Smith buy tickets for themselves and their four children.

The cost of an adult ticket is £6 more than the cost of a child ticket.

The total cost of the SIX tickets is £40.50

Work out the cost of an adult ticket.

In your working, let c be the cost of a child ticket and a be the cost of an adult ticket.