

The Mean

In class 7E there are 8 girls, and 6 boys.  
The mean weight of the girls is 39.4kg.  
The mean weight of the boys is 43.7kg.  
What is the mean weight of the students?

There are 20 bags of sweets on a shelf.  
The mean number of sweets in a bag is 13. The table shows how many sweets are in 19 of the bags.

Number of sweets	Frequency
12	9
13	5
14	3
15	2

How many sweets are in the 20<sup>th</sup> bag?

Mean from Grouped Data

The table gives information on the mass of each member of a squad of rugby players.

Mass, $m$ (kg)	Frequency
$70 < m \leq 80$	7
$80 < m \leq 90$	12
$95 < m \leq 100$	8
$105 < m \leq 110$	7
$110 < m \leq 120$	6

Work out an estimate of the mean mass of a squad member. Give your answer to one decimal place.

Time Series

The diagram shows the quarterly download figures for an app over a three year period.

- a) To the nearest thousand, estimate the number of downloads in each year.
- b) Is it possible to estimate how many times the app will be downloaded in 2018, using this diagram? Explain your reasoning.



Stem and Leaf

This diagram shows 10 participants resting heart rate before and after a training programme. Compare the two distributions using descriptive statistics.

BEFORE	AFTER
4	6 8
6 5	5 3 5 7
7 3	6 0 1 1 7
9 8 5 4 0	7 4
3	8
KEY: 4   6 means 64	KEY: 7   3 means 73

Measures of Location and Spread

For the following data,  
3.2, 7.5, 2.2, 2.8, 6.5, 5.8, 5.8, 4.9, 5.0

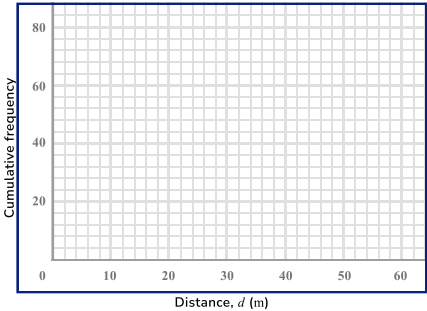
- Find:
- a) The range  
b) The median  
c) The lower quartile  
d) The upper quartile  
e) The interquartile range

Cumulative Frequency

The best distance achieved by year 10 students throwing a javelin is recorded below.

- a) Complete the table and plot a cumulative frequency diagram
- b) Use your diagram to estimate the median distance the javelin was thrown.

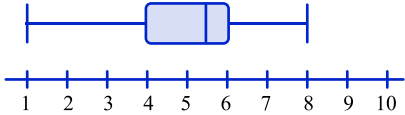
Distance, $d$ (m)	Frequency	Cumulative frequency
$d \leq 20$	8	
$20 < d \leq 30$	12	
$30 < d \leq 40$	34	
$40 < d \leq 50$	21	
$50 < d \leq 60$	5	



Box Plots

A box plot is created to represent some data. Use this box plot to state.

a) The range  
b) The median  
c) The interquartile range



Histograms

The heights of plants in a garden are recorded in this table.

- a) Use the histogram to calculate the missing frequencies.
- b) Complete the histogram

Height, $h$ (cm)	Frequency	
$0 < h \leq 15$		
$15 < h \leq 20$	25	
$20 < h \leq 30$	30	
$30 < h \leq 40$	15	
$40 < h \leq 50$		

