

Mean and Standard Deviation

Calculate the mean and standard deviation for the data given in each of the following frequency distributions.

1.

The number of times each week that a factory machine broke down was noted over a period of 50 consecutive weeks. The results are given in the following table.

Number of breakdowns	0	1	2	3	4	5	6
Number of weeks	2	12	14	8	8	4	2

2.

The table shows information about the numbers of people per household in 280 900 households in the north-west of England in 2001.

Number of people	1	2	3	4	5 or more
Number of households	86 900	92 500	45 000	37 100	19 400

Taking '5 or more' to mean '5 or 6', calculate estimates of the mean and standard deviation of the number of people per household. [5]

3.

The following table summarises the distances, to the nearest km, that 134 examiners travelled to attend a meeting in London.

Distance (km)	Number of examiners
41–45	4
46–50	19
51–60	53
61–70	37
71–90	15
91–150	6

4.

The grouped frequency distribution for the life time (in hours) of 200 electric bulbs is given below.

Life time (hours)	590-599	600-609	610-619	620-629	630-639	640-649	650-659	660-669
Frequency	4	9	23	41	81	29	9	4
