



community project

encouraging academics to share statistics support resources

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The following resources are associated:

3. Descriptive Statistics workshop

Activity 1

(Chart Choice and Layout for Qualitative Data)

Consider the four charts below. Each has at least one aspect that could be improved. Spend no more than one minute on each discussing what the **main** improvement is that could be made.

Chart 1

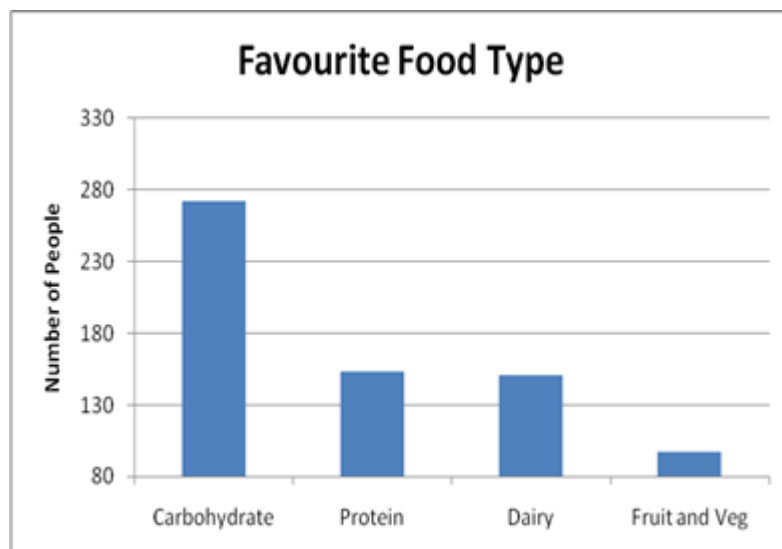


Chart 2

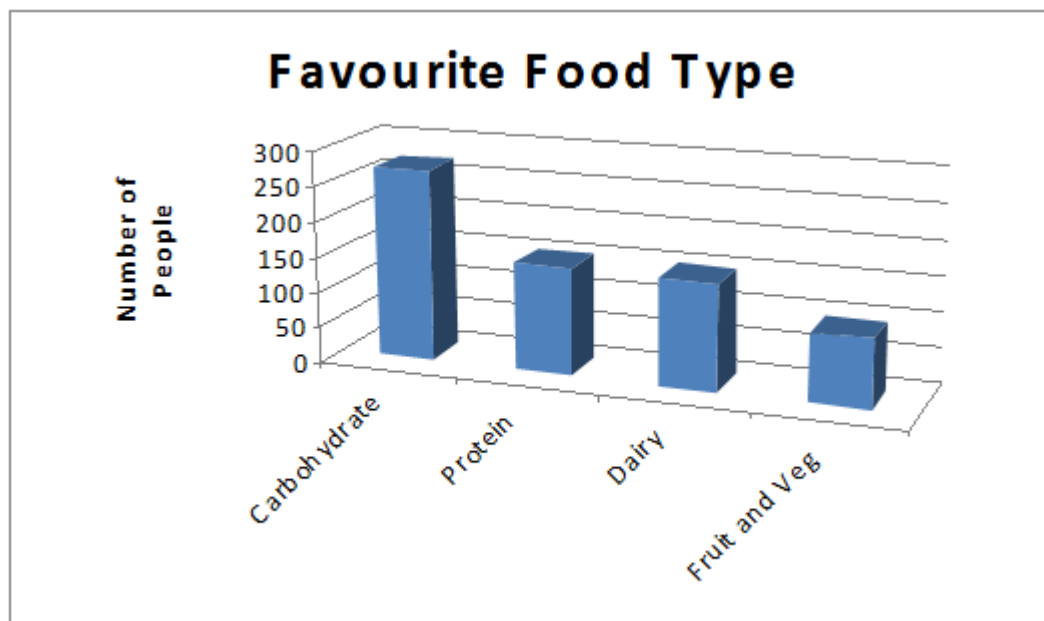


Chart 3

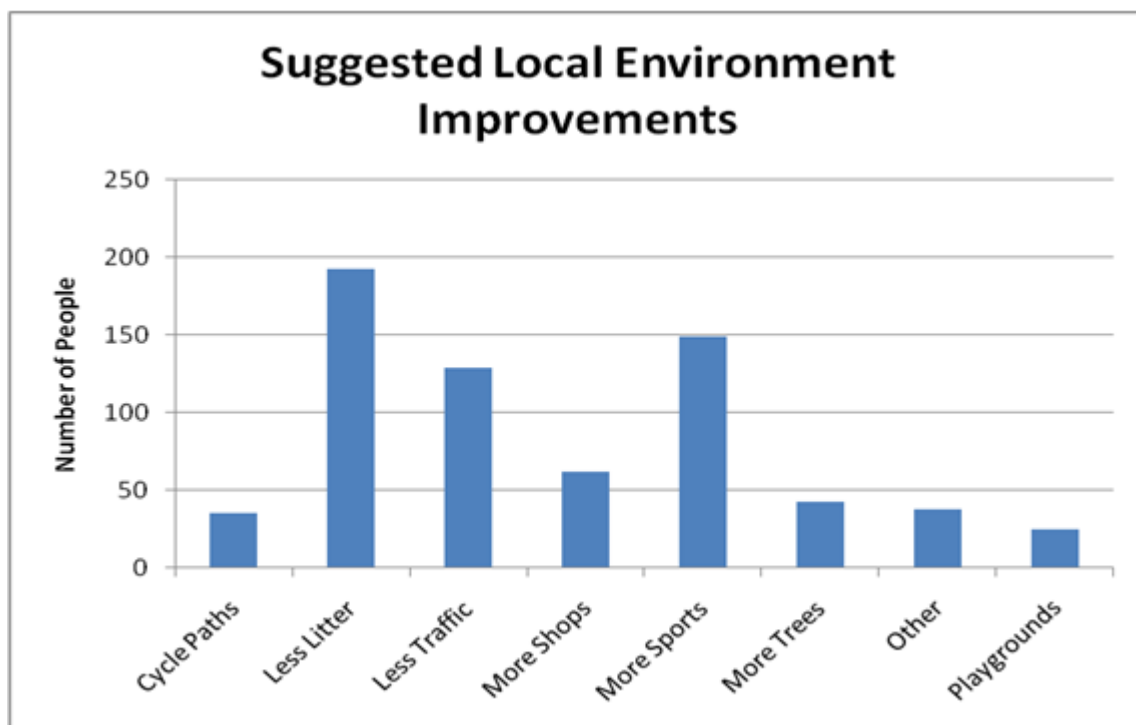
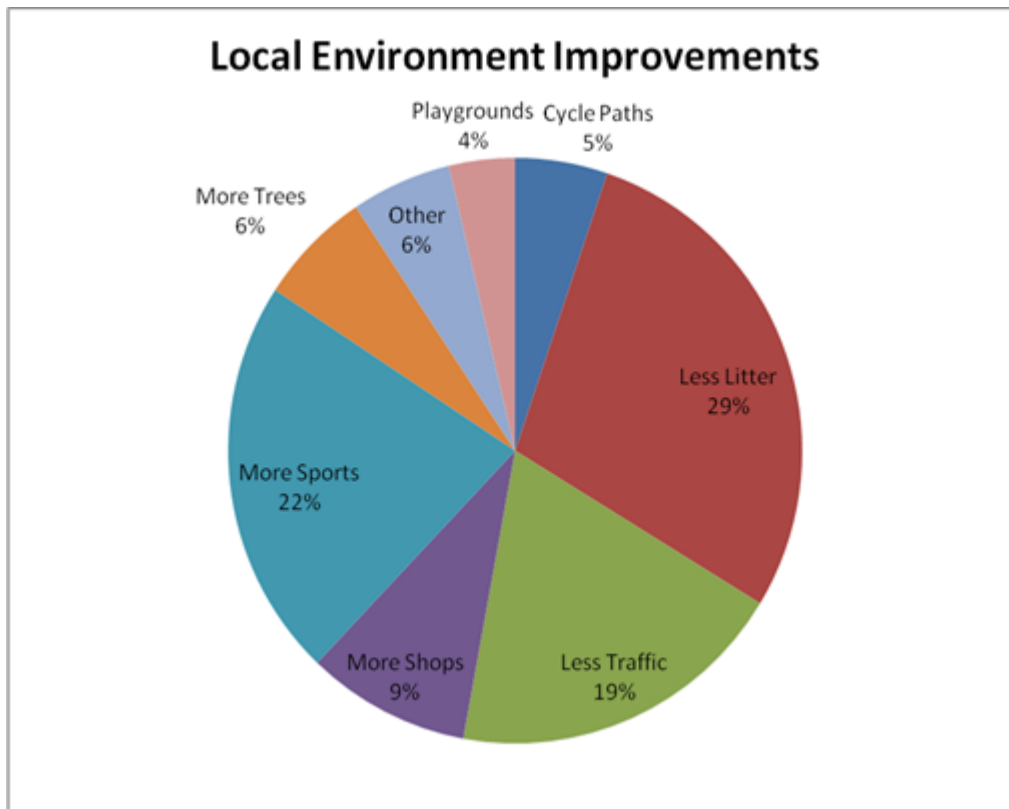


Chart 4

Activity 2

(Frequency Distributions and Choice of Mean, Median or Mode)

The following three data sets were analysed and a histogram (or bar chart) is shown for each data set.

In each case, discuss whether the mean, median or mode provides a better indicator of the average.

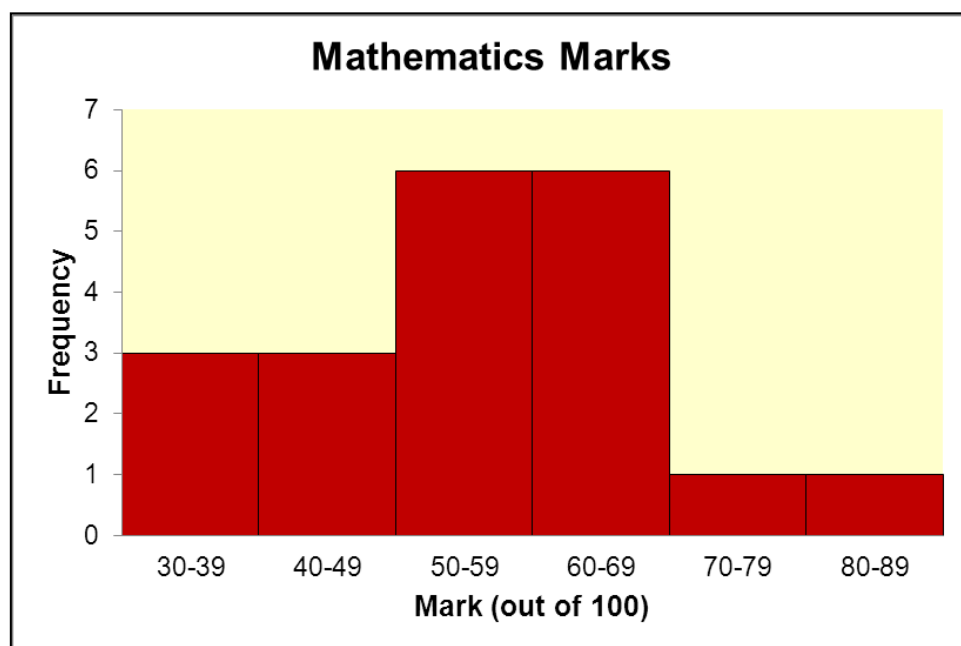
1. The marks (out of 100) for a mathematics exam for 20 students (ordered by size) were:

30	35	37	40	40	49	51	54	54	55
57	58	60	60	62	62	65	67	74	89

Mean = 55.0

Median = 56.0

Mode = both 50-59 and 60-69



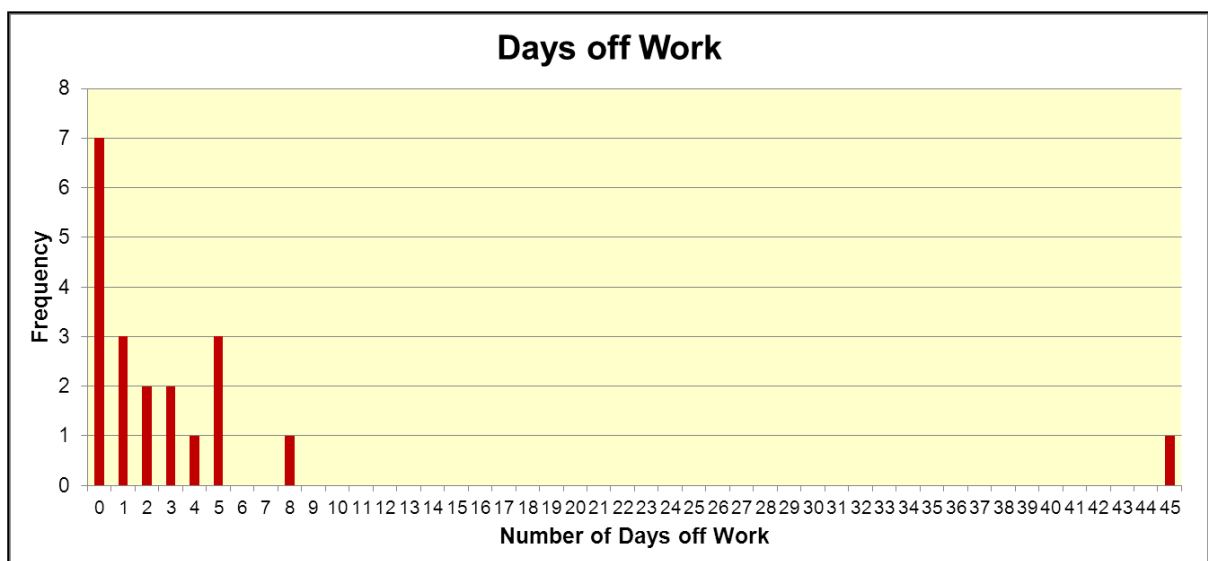
2. The numbers of days work missed by 20 workers in one year (ordered by size) were:

0	0	0	0	0	0	0	1	1	1
2	2	3	3	4	5	5	5	8	45

Mean = 4.3

Median = 1.5

Mode = 0



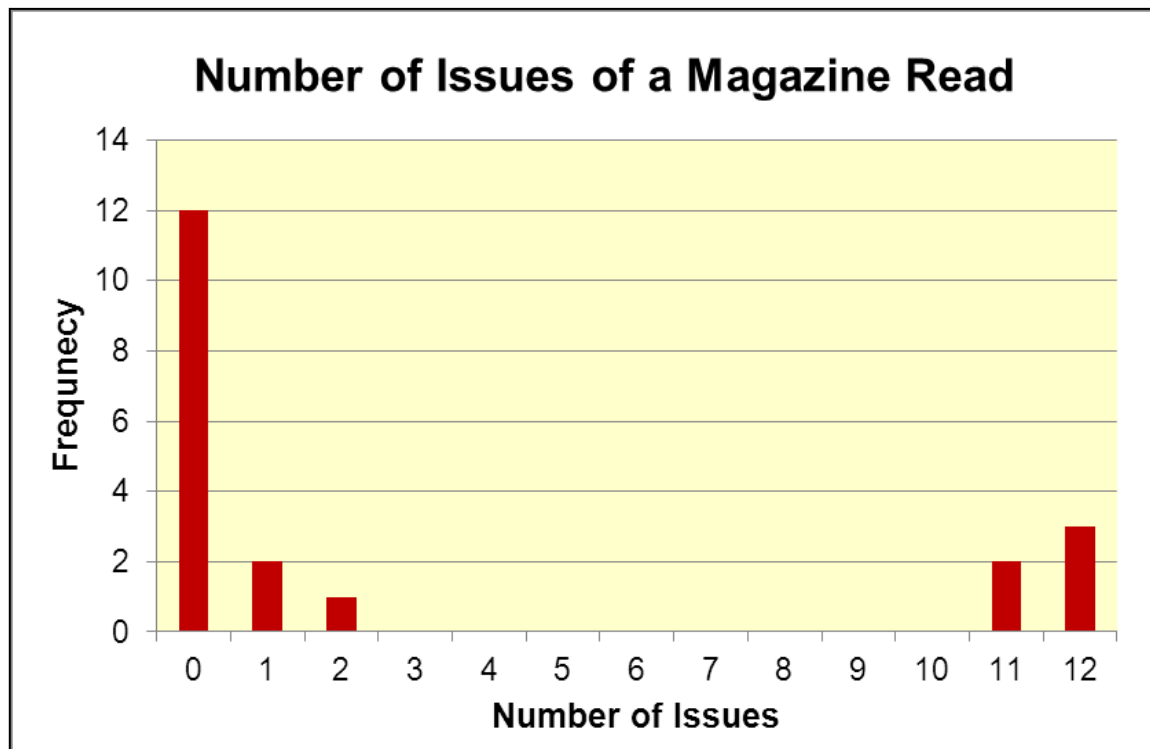
3. The number of issues of a particular monthly magazine read over a year by 20 people were:

0	1	11	0	0	0	2	12	0	0
12	1	0	0	0	0	12	0	11	0

Mean = 3.1

Median = 0

Mode = 0



Activity 3

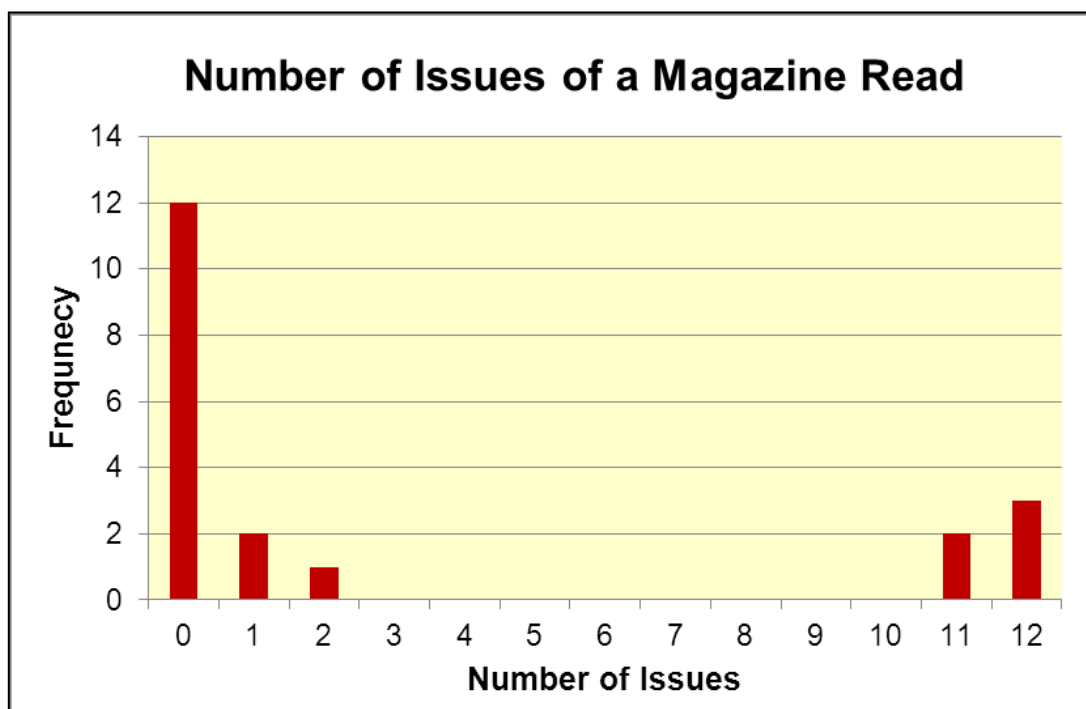
(Measures of spread for a sample data set)

Calculate the lower quartile and upper quartile for Data Set 3:

0	1	11	0	0	0	2	12	0	0
12	1	0	0	0	0	12	0	11	0

Draw the range, standard deviation and inter-quartile range on the chart below, using:

- ☐ Mean = 3.1
- ☐ Standard deviation = 5.1



Discuss in small groups which measure of spread you think is the most useful.