

# Tally Charts

## Raw Data

Raw data is information that has been collected, but is not organised into any sort of structure. For example, consider the following scores obtained by 70 students in a spelling test:

7,5,9,2,7,4,7,5,8,9,2,3,2,6,7,5,7,10,2,3,6,1,3,5,7,8,6,7,7,9,3,4,2,7,5,1,6,9,8,6,5,4,1,10,2,6,8,7,6,5,4,5,7,8,6,8,7,4,3,9,1,4,10,9,9,5,8,2,8,4,

This is raw data, i.e. it has not been arranged into any sort of order.

It is difficult to draw any conclusions from the data when it is in such a disorganised state. Statisticians therefore seek to structure the data so that it can be analysed. One way of doing this is by using a tally chart to obtain a frequency distribution.

It can be seen from the data that the lowest score obtained was 1 and the highest score was 10. The scores from 1 to 10 inclusive are therefore written in the first column of our chart. We also add “tally” and “frequency” columns to our table, as shown below:

Score	Tally	Frequency
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
	<b>Total</b>	

The next step is to go through the list of raw data making a mark in the correct part of the tally column for each individual score. For example, for the first score, 7, a mark is made in the seventh row of the tally column. The marks are collected into groups of five for easy totalling by making every fifth tally mark strike through the previous four as follows: **||||**.

Shown below is the completed tally chart for the spelling test data.



Score	Tally	Frequency
1	IIII	4
2	III II	7
3	IIII	4
4	III II	7
5	III IIII	9
6	III III	8
7	III III II	12
8	III III	8
9	III II	7
10	III	3
	<b>Total</b>	<b>69</b>

Hence we obtain the frequency table

Score	1	2	3	4	5	6	7	8	9	10
Frequency	4	7	4	7	9	8	12	8	7	3

