

L2 Qualitative Data

Tables, Diagrams & Analysis

Data may be:

1. Raw data
2. Tally & Frequency table
3. Relative frequency tables
4. **Grouped data tables**

Diagrams may include:

1. [Broken line graphs](#)
2. Bar graphs
3. Pie charts
4. **Histogram**
5. **Box and whiskers plots**

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To analyze the data we may calculate:

Measures that stay close to the center of the ordered data:

1. **Mode (Mo):** the most frequent value in the data.
2. **Median (Md):** the middle value in the **ordered** data.
3. **Mean (average) ($\bar{x}$):** the sum of the data divided by the number of data entries.

Measures that show the dispersion of the ordered data:

4. **Range (R):** The difference between the highest and lowest value.
$$R = X_{\max} - X_{\min}$$

Measures that show position relative to the ordered data:

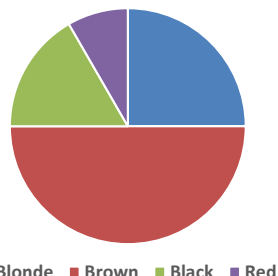
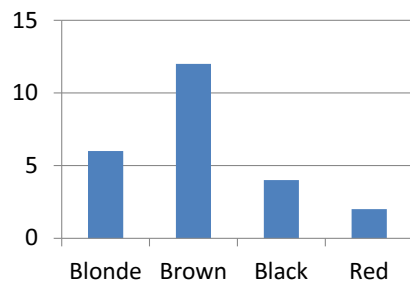
5. **Quartiles (Q1,Q2,Q3),** Quintiles, percentiles.

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Qualitative data

Can be represented by a bar graph or a pie chart

color of hair	frequency	Relative Freq.	Angle
Blonde	6		
Brown	12		
Black	4		
Red	2		
Total	24		



Only Mode
can be
found:

Mo: Brown

3

Weighted Mean ($\bar{x}$): the average when some values have more weight than others

Ex 4: (Weighted data)
find John's mean mark

Term	Weighting	John's mark
1	0.14	65%
2	0.14	70%
Mid exam	0.075	70%
3	0.285	85%
Final exam	.36	63%

Practice: 8.2 # 1, 2 and 8.6 # 1-7