Variables

* Random variable
* Numerical or categorical

Classification 1

* Univariate
* Multivariate

Classification 2

* Quantitative
  + Can be measured as ordinal data set
* Qualitative

Quantitative data are measures of values or counts and are expressed as numbers.

Quantitative data are data about numeric variables (e.g., how many; how much; or how often).

Qualitative data are measures of 'types' and may be represented by a name, symbol, or a number code.

Qualitative data are data about categorical variables (e.g., what type).

Measurements to analyse the variables:

* The size of the difference
  + Direction of reference

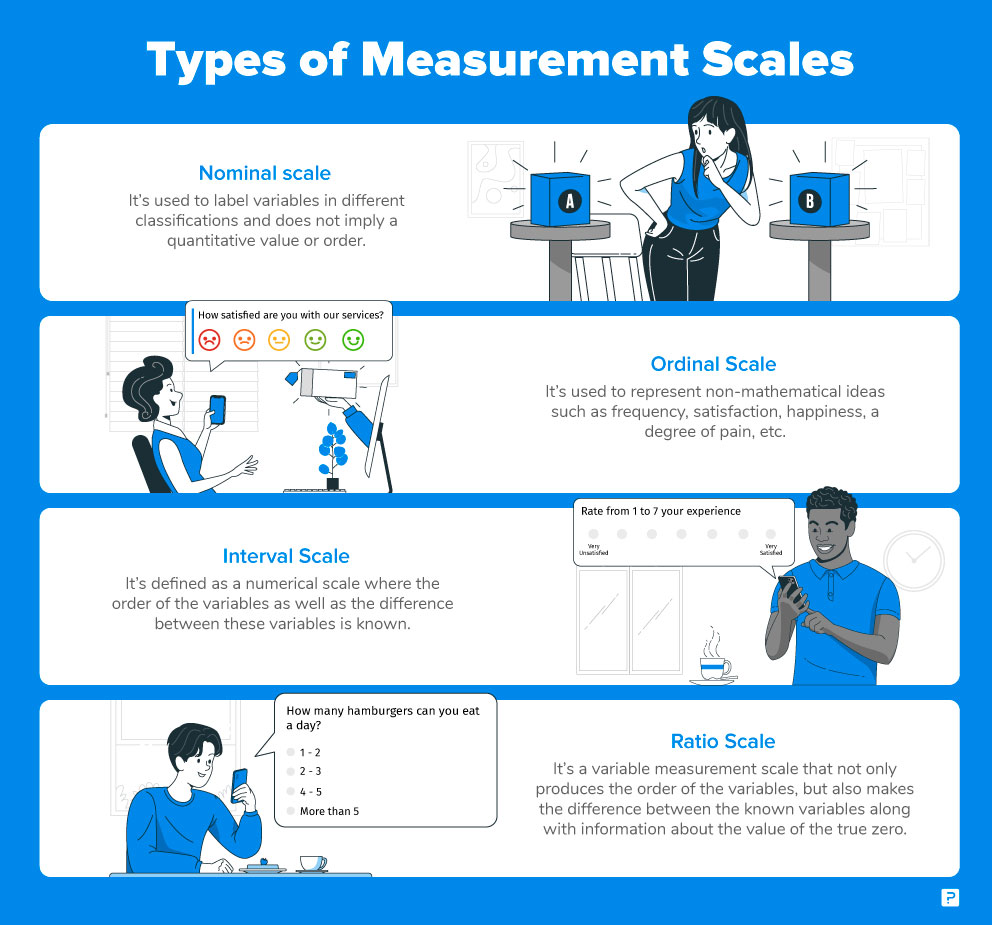
**Nominal and Ordinal scale of measurement**

[**https://www.questionpro.com/blog/nominal-vs-ordinal-scale/**](https://www.questionpro.com/blog/nominal-vs-ordinal-scale/)

[**https://www.questionpro.com/blog/nominal-ordinal-interval-ratio/**](https://www.questionpro.com/blog/nominal-ordinal-interval-ratio/)

Nominal scale is a naming scale, where variables are simply “named” or labelled, with no specific order. Ordinal scale has all its variables in a specific order, beyond just naming them. Interval scale offers labels, order, as well as a specific interval between each of its variable options. Ratio scale bears all the characteristics of an interval scale, in addition to that, it can also accommodate the value of “zero” on any of its variables.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Offers:** | **Nominal** | **Ordinal** | **Interval** | **Ratio** |
| The sequence of variables is established | – | Yes | Yes | Yes |
| Mode | Yes | Yes | Yes | Yes |
| Median | – | Yes | Yes | Yes |
| Mean | – | – | Yes | Yes |
| Difference between variables can be evaluated | – | – | Yes | Yes |
| Addition and Subtraction of variables | – | – | Yes | Yes |
| Multiplication and Division of variables | – | – | – | Yes |
| Absolute zero | – | – | – | Yes |



Classification 3

* Continuous
* Discrete

1. **Frequency Distributions:**
2. Percentiles and Percentile ranks
3. Grouped Frequency Distribution table