- μ: Population mean (mu).

- σ: Population standard deviation (sigma).

- π: Population proportion.

- $\hat{\mu}$: An estimate of the parameter μ.

- $\bar{x}$: A statistic and an estimate (for STAT110/115 paper only).

- Proportion: Fraction of one quantity when compared to the whole.

- Ratio: Fraction given by one quantity over another.
  N.B., both quantities have the same units.

- Rates (the difference between rates and ratio): Rates are like ratios for quantities with different units.

- Random variables are described by: Probability distributions.

- Observed values of random variables are: Data.

- Difference between random variables and observed/realised value:
  Random variables: unknown quantity varies unpredictably;
  Observed/realised value: got the actual quantity of the unknown quantity.

- Types of variables:

  - Continuous - can be expressed on a continuous scale in which every value is possible.
  - Discrete - can be in one-to-one correspondence with the counting numbers.
  - Categorical - restricted to one of a set of categories. For example 'Heads' or 'Tails'.
    * type 1: 0 - 1 binary, A/B/O/AB more than two
    * type 2: A/B/O/AB nominal, pass/fail ordinal

- Types of censored data: Right censored, Left censored, Interval-censored
  N.B., censored data are categorised by two variables: the censor type and the censoring point or interval.

  - Right censored: The true value is known to be larger than a recorded value.
    e.g., we know that someone lived until at least 31 Dec 2017. 50+
  - Left censored: The true value is known to be smaller than a recorded value.
    e.g., we know that a measurement is less than a known limit of detection. 10-
  - Interval-censored: The true value is known to lie between two values.
    e.g., we know the date of infection with HPV is after a negative test and before a positive test 2 years later.