Theoretical Sampling

- Sampling with replacement
- Total possible samples = N^n
  - N is the size of the population
  - n is the size of the samples

Experimental Sampling

- Sampling without replacement
- Total possible samples = $\frac{N!}{n!(N-n)!}$
  - N is the size of the population
  - n is the size of the samples

The Mean of the Sampling Dist.

- The mean of the sampling distribution of the mean is μ_M and

$$\mu_M = \mu$$

- Notation:
  - μ_M is the mean of all the sample means
  - μ is the mean of the population

Standard Error

- The standard deviation of the sampling distribution of the mean (standard error) is σ_M and

$$\sigma_M = \sigma / \sqrt{n}$$

- Notation:
  - σ_M is the standard deviation of all the sample means
  - σ is the population standard deviation and n is the sample size