

# Summary of Tableau 2, Part 1

---

- ✧ The universal set (or population) of size  $n$ :  $\{a_1, a_2, \dots, a_n\}$
- ✧ A sample of size  $k$ :
  - ✧ Number of ordered samples  $(a_{j_1}, a_{j_2}, \dots, a_{j_k})$ 
    - ✧ With replacement:  $n^k$ .
    - ✧ Without replacement:  $n^{\underline{k}} = n \times (n - 1) \times (n - k + 1)$ .
  - ✧ Number of subsets (or subpopulations)  $\{a_{j_1}, a_{j_2}, \dots, a_{j_k}\}$ :  $\binom{n}{k} = \frac{n^{\underline{k}}}{k!}$ .