Systematic Random Sampling

Procedure:

• Divide the population size by the sample size and round down to the nearest whole number, m.

Systematic Random Sampling

- Divide the population size by the sample size and round down to the nearest whole number, m.
- ② Use a random number generator to get a number k between 1 and m.

Systematic Random Sampling

- lacktriangle Divide the population size by the sample size and round down to the nearest whole number, m.
- ② Use a random number generator to get a number k between 1 and m.
- **3** Select for the sample those members of the population numbered $k, k+m, k+2m, \dots$

Cluster Sampling

Procedure:

• Divide the population into groups (clusters).

Cluster Sampling

- Divide the population into groups (clusters).
- ② Obtain a SRS of the clusters.

Cluster Sampling

- Divide the population into groups (clusters).
- 2 Obtain a SRS of the clusters.
- Use all of the members of the clusters selected in Step 2.

Stratified Sampling (with Proportional Allocation)

Procedure:

• Divide the population into subpopulations (strata).

Stratified Sampling (with Proportional Allocation)

- Divide the population into subpopulations (strata).
- Prom each stratum, obtain a SRS of side proportional to the size of the stratum:

$$stratum sample size = \frac{total sample size \times stratum size}{population size}$$

Stratified Sampling (with Proportional Allocation)

Procedure:

- Divide the population into subpopulations (strata).
- From each stratum, obtain a SRS of side proportional to the size of the stratum:

$$\text{stratum sample size} = \frac{\text{total sample size} \times \text{stratum size}}{\text{population size}}$$

③ Use all members obtained in Step 2.