Hypotheses, Sources of Data and Sampling Principles

Primary Data: _____ _____that a researcher gathers for an experiment.

Secondary Data: Data that _____ _____has already gathered for another
purpose (usually from publications like the _____ or _____).

Population: The _____ _____of people or items being studied.

Census: A survey of ___ members of a _____.

Sample: Any group of people or items selected from a _____.

Random Sample: A sample in which ___ _____ of a _____have an
_____chance of being chosen.

- **Simple Random Sample:**   Choosing a _____ number of members _____
  from the _____population.

- **Systematic Random Sampling:**   Choosing members of a population at
  _____ from a population.

- **Stratified Random sampling:** Dividing a population into _____ groups and then
  choosing a _____ number randomly from each group.

Bias: Error resulting from choosing a sample that does not represent the
_____ population.

Examples:

1. Identify each data source as primary or secondary. State one advantage
   of each source of data.
   a) A researcher interviews 100 employees about the length of time they spend
      travelling to work.

   b) A researcher searches reference books in the library to check the value of cars
      made in 2017.

2. Mrs. Bodkin wants to know what students think about purchasing their own graphing calculator for math classes. Describe 3 different methods she could use to select a random sample of 200 students. (Assume there are 1200 students at W-ODSS – 329 grade 9's, 300 grade 10's, 280 grade 11's and 281 grade 12's)

    a) Simple Random Sample:

    b) Systematic Random Sample:

    c) Stratified Random Sample