

2. a) i) unit

ii) process

iii) categorical variate

iv) continuous variate

v) continuous variate

b) The total amount of fuel consumed.

c) Sample survey. Because the population is

just Professor Stringer's cars and so it is finite, we do not consider observational studies since the population of interest is infinite by definition. Also, we exclude experimental studies because we do not change any variate. The reason that it is sample survey is that the population is finite and the variates of interest are collected in a way that is similar to using a questionnaire, which is that Professor Stringer writes down the values of the four variates every time he fills a car with gas.