

Total 12 points

Please show all your work.

1. (3 pts) Determine whether the numerical value describe a parameter or a statistic.

a) Nineteen percent of a sample of Indiana ninth graders surveyed said they smoked cigarettes daily.

Statistic

b) In a recent study of math majors at a university, 20 students were minoring in physics.

Parameter

c) In January of 2010, 48% of the governors of the 50 states in the United States were Republicans.

Parameter

2. (3 pts) Identify the data set's level of measurement (nominal, ordinal, interval, ratio):

a) the years of birth for the marathon runners

Interval

b) student ID numbers

Nominal

c) heights of air balloons

Ratio

3. (3 pts) Identify the sampling technique used (random, cluster, stratified, systematic, convenience):

a) A student asks 18 friends to participate in a psychology experiment.

Convenienceb) The policeman stops and checks every 9th driver for blood alcohol level.Systematic

c) At a big local community center there are 10 ESL (English Second Language) classes offered. A researcher interviews all of the students from 2 classes.

Cluster

4. (3 pts) Decide which method of data collection you would use to gather data for the following study (survey, observation, experiment, simulation):

a) A study on the effect of ^{HIGH} dietary intake of Vitamin C and iron on lead levels in adultsExperiment

b) a study of how fast the virus would spread in a metropolitan area

Simulation

c) a study of how fourth grade students solve a puzzle

Observation