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1. Fill in the blank: A _____ sample accurately reflects the characteristics of a population. 1 / 1 point

- nonrepresentative
- very small
- representative
- biased

Correct

2. Fill in the blank: In statistics, _____ refers to the number of individuals or items chosen for a study or experiment. 1 / 1 point

- sampling frame
- sampling method
- sample size
- target population

Correct

3. Which of the following statements accurately describes the relationship between probability sampling and non-probability sampling? 1 / 1 point

- Probability sampling is typically less expensive than non-probability sampling.
- Probability sampling is typically more convenient than non-probability sampling.
- Probability sampling is more biased than non-probability sampling.
- Probability sampling gives data professionals a better chance of generating a representative sample than non-probability sampling.

Correct

4. Which sampling method involves dividing a population into groups and randomly selecting some members from each group for the sample? 1 / 1 point

- Stratified random sampling
- Cluster random sampling
- Systematic random sampling
- Simple random sampling

Correct

5. Which sampling method involves choosing members of a population who are easy to contact or reach? 1 / 1 point

- Snowball sampling
- Purposive sampling
- Voluntary response sampling
- Convenience sampling

Correct

6. Which of the following statements accurately describe the standard error of the mean? Select all that apply. 1 / 1 point

- [x] The lower the standard error, the more precise the sample mean is.

Correct

- [x] A larger standard error indicates that, in repeated sampling, the sample means are more spread out.

Correct

- [x] The standard error of the mean measures variability among the sample means obtained in repeated sampling.

Correct

- [ ] The higher the standard error, the more precise the sample mean is.

7. What does the central limit theorem state? **1 / 1 point**

- ( ) The sampling distribution of the mean approaches a binomial distribution as the sample size increases.
- (•) The sampling distribution of the mean approaches a normal distribution as the sample size increases.
- ( ) The sampling distribution of the mean approaches a Bernoulli distribution as the sample size increases.
- ( ) The sampling distribution of the mean approaches a Poisson distribution as the sample size increases.

Correct

8. A data professional is working with data about annual household income. They want to use Python to simulate taking a random sample of income values from the dataset. They write the following code: `sample(n=100, replace=True, random_state=230)`. What is the sample size of the random sample? **1 / 1 point**

- ( ) 10
- ( ) 230
- ( ) 23
- (•) 100

Correct