

Please answer all questions

	1	2	3	4	5	6	7
Answer Grid:	8	9	10				

Multiple Choice Questions (use the answer grid).

1. Mileage tests were conducted on a randomly selected sample of 100 newly developed automobile tires. The average tread wear was found to be 50,000 miles with a standard deviation of 3,500 miles. What is the best estimate of the average tread life in miles for the entire population of these tires?
 - (a) 50,000
 - (b) 3,500
 - (c) 50,000/100
 - (d) 3,500/100

2. For a population that is **not** normally distributed, the distribution of the sample means will:
 - (a) be negatively skewed.
 - (b) approach the normal distribution.
 - (c) be positively skewed.
 - (d) take the same shape as the population.

3. As the size of the sample increases, what happens to the shape of the sampling means?
 - (a) Cannot be predicted in advance
 - (b) Approaches a normal distribution
 - (c) Positively skewed
 - (d) Negatively skewed

4. All possible samples of size n are selected from a population and the mean of each sample is determined. What is the mean of the sample means?
 - (a) Exactly the same as the population mean
 - (b) Larger than the population mean
 - (c) Smaller than the population mean
 - (d) Cannot be estimated in advance

5. Sampling error is the difference between a corresponding sample statistic and the
 - (a) sample mean.
 - (b) biased sample.
 - (c) population parameter.
 - (d) chance error.

6. What is the difference between a sample mean and the population mean called?
 - (a) Standard error of the mean
 - (b) Sampling error
 - (c) Interval estimate
 - (d) Point estimate

7. Suppose we select every fifth invoice in a file. What type of sampling is this?
 - (a) Simple random
 - (b) Stratified random
 - (c) Cluster
 - (d) Systematic

8. Manufacturers were subdivided into groups by volume of sales. Those with more than \$100 million in sales were classified as Class A large; those from \$50 to \$100 million as Class A medium size; and those between \$25 and \$50 million, and so on. Samples were then selected from each of these groups. What is this type of sampling called?
 - (a) Simple random
 - (b) Stratified random
 - (c) Cluster
 - (d) Systematic

9. In which of the following situations is the Central Limit Theorem not applicable?
 - (a) Sample size is small
 - (b) Population is not normally distributed
 - (c) Sample size is large
 - (d) Population is normally distributed

Quiz 4

QUME 232

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- (a) When the sample is small and the population is normal.
- (b) When the sample is large and the population is normal.
- (c) When the sample is large, above 30, and the population is not normal.
- (d) When the sample is small, below 30, and the population is not normal.
10. What is it called when all the items in a population have a chance of being selected in a sample?
- (a) Random sampling
- (b) z-score
- (c) Sampling error
- (d) Nonprobability sampling