

Quick Questions 11 Sampling and the Sampling Distribution of the Means

I. Place the number of the appropriate formula next to the concept it defines.

- A. The 99% confidence interval _____
- B. Standard error of the mean _____
- C. Used when the population variance is unknown and the sample is large. _____
- D. The 95% confidence interval _____
- E. The mean of the sampling distribution of the means _____

1.	$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$
2.	$\mu_{\bar{x}}$
3.	$\bar{x} \pm 2.58 \frac{\sigma}{\sqrt{n}}$
4.	$\bar{x} \pm 1.96 \frac{\sigma}{\sqrt{n}}$
5.	$\bar{x} \pm 2.58 \frac{s}{\sqrt{n}}$

II. Answer the following true or false and fill in the blank questions.

- A. The primary cause of sampling error is poor collection techniques. T F
- B. The standard error of the mean is halved when the sample size is doubled. T F
- C. A one-number estimate of the population mean is called a _____ estimate of the mean.
- D. A range for a population parameter is called the _____.
- E. A _____ may be more accurate than a simple random sample because a small diverse section of the population might not be chosen with a simple random sample.

III. Calculate the 95% and 99% confidence intervals for the population mean given a sample of 36 resulted in a mean of 55 and a standard deviation of 18.

Data Set For People Using Statistics Software								
55	55	39	50	81	48	43	85	38
58	50	57	52	75	55	85	55	81
52	47	62	25	54	71	32	73	40
72	98	53	35	56	55	21	26	46