

Sampling Error

- * The difference between the _____ and the _____ of the parameter.
- * **Margin of Error E** – the _____ error (_____) between the _____ and the _____ of the parameter.
- * The _____

To find the Margin of Error:

- * Use the formula:

- * As long as these conditions are met:

- * The sample is _____.

- * The population is _____

OR _____.

EX:

- * You take a random sample of 40 employees from several grocery stores to find the mean number of hours worked. Use a 95% confidence level to find the margin of error for the mean number of hours worked by grocery store employees. Assume the population standard deviation is 7.9 hours.

Confidence Intervals for a Population Mean

- * Using the _____ and the _____, you can construct an _____ of a population parameter (such as the _____)
- * This interval is called a _____ for a population _____:

Constructing a Confidence Interval for a Population Mean (with known standard deviation):

- * 1) Make sure that _____ is known, the sample is _____, and that either the population is _____ or _____.
- * 2) Find the sample statistics _____:

* 3) Find the critical value _____ that corresponds to the given _____.

* 4) Find the margin of error _____:

* 5) Find the left and right endpoints and form the
_____ :

EX:

- * A college admissions director wishes to estimate the mean age of all students currently enrolled. In a random sample of 20 students, the mean age is found to be 22.9 years. From past studies, the standard deviation is known to be 1.5 years, and the population is normally distributed. Construct a 90% confidence interval of the population mean age.

