

**PRECALC JOURNAL
STATISTICS**

1. Statistics is _____
_____.
 2. a) The purpose of inferential statistics is _____
_____ while the purpose of descriptive statistics is _____.
 - c) A statistic is _____
while a parameter is _____.
 - a) _____ is the actual difference between the sample result and the true population result while _____ occurs when sample data are incorrectly collected, recorded, or analyzed.
 - b) The biggest problem with sampling is _____.
3. Complete the following table.

Measures of Central Tendency	Symbol <i>(if one exists)</i>	Formula or Method of Calculation
Measures of Variation	Symbol <i>(if one exists)</i>	Formula or Method of Calculation

4. Measures of central tendency describe _____
while measures of variation describe _____.
5. The graphs which visually display the spread of data are _____
_____.
6. The best measures of central tendency and variation to use when the data is skewed are _____
while the best measures to be used when the data is centrally packed are _____.
7. When the standard deviation of a normal distribution is large, the curve is _____,
however, when the standard deviation is small, the curve is _____.
8. a) The purpose of a confidence interval is _____
_____.

(b) If you were given a 90% confidence interval of 85-88 for a sample of Precalc test scores, it would mean _____

9. The null hypothesis is _____ while the alternative hypothesis is _____.

10. A one-tailed test is used when μ is _____ \bar{x} while a two-tailed test is used when μ is _____ \bar{x} . (Hint: Use inequalities.)

11. If at the end of a hypothesis test the probability is less than the required level of significance, we say we _____. If the probability is greater than the required level of significance, we say we _____.

12. List and describe the five methods of sampling.

13. Important Rules, Formulas, Etc.

a) Draw the following distributions:

Normal distribution with standard percentages Distribution skewed to the right Distribution skewed to the left

b) z-score formula for a population c) z-score formula for a sample (z^*)

d) Standard error of the mean formula e) Margin of error formula

f) Confidence interval formula g) Sample size formula

h) Name the two calculator functions used to solve normal distribution problems. Indicate when each should be used.