

**PRECALC JOURNAL
STATISTICS**

1. Statistics is _____
_____.
2. a) The purpose of descriptive statistics is _____
_____ while the purpose of inferential statistics is _____.
- b) A parameter is _____
while a statistic is _____.
3. a) _____ error occurs when sample data are incorrectly collected, recorded, or analyzed while _____ error is the actual difference between the sample result and the true population result.
- b) The biggest problem with sampling is _____.
4. 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

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

(b) If you were given a 95% confidence interval of 86-91 for a sample of Precalc test scores, it would mean _____

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

11. A one-tailed test is used when _____ while a two-tailed test is used when _____. (Hint: Use inequalities.)

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

13. List and describe the five methods of sampling.

14. 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.