

REVIEW SHEET FOR EXAM #3 (50 pts) Psychology 230

This is a 2-part test. Part 1 is closed-note. Part 2 is open-note. For Part 2, you may use your calculator and 8.5 x 11 inch paper with handwritten notes—both sides. You may NOT use your mobile device.

FROM THIS POINT ON, YOU SHOULD NOT BE CALCULATING STANDARD DEVIATION MANUALLY. USE THE MEMORY FUNCTION ON YOUR CALCULATOR. YOUR ABILITY TO QUICKLY AND AUTOMATICALLY PERFORM THIS CALCULATION ON A CALCULATOR WILL MAKE THE REST OF THIS CLASS MUCH EASIER.

Chapter 9: The Normal Distribution

- Practice drawing the normal curve, guessing answers and following the outlines listed in the chapter.
- Understand and be able to use the known characteristics of the *standard normal curve*.
- Understand and be prepared to apply the information in the *normal curve table*.
- Be able to compute a *z score*.
- Be able to compute a specific *area* under the normal curve.
- Be able to find the *percentage* of the normal curve above a score.
- Be able to find *percentage frequency*.
- Be able to find an *area between two scores* under the normal curve
- Know how to calculate the probability of *specific scores* under the normal curve.
- Be able to find a score that has a particular *percentile rank*.
- Know the procedure for finding *deviant scores*.

Chapter 10: Confidence Intervals and Hypothesis Testing

- Understand what is meant by the term “unbiased estimate” when referring to a sample mean.
- Define the *sampling distribution of means*.
- Understand the properties of the sampling distribution of means.
- Understand the relationship between *error* and *sample size*.
- Understand what *degrees of freedom (df)* refers to.
- Be able to calculate the estimated *standard error of the mean*.
- Be able to compute *confidence intervals* and perform a *one-sample t-test*.
- Where does *error* come from in hypothesis testing?
- What is the purpose of computing confidence intervals?
- What does “level of confidence” really mean?
- Define and give an example of the *null hypothesis*.
- Define and give an example of an *alternative hypothesis*.
- Understand the *6-step procedure* for testing the null hypothesis
- Be able to walk through these steps for a *one-sample, t-test* problem. Can you manually calculate a computed *t* value. Do you know why you would *accept* or *reject*? Do you understand what these conclusions mean?
- Be able to state *hypotheses* and *conclusions* verbally as well as statistically.
- Understand the major components of the APA probability statement (for example, $t(10)=1.32, p>.05$). Be able to interpret an APA probability statement.
- Distinguish between *Type I* and *Type II* error.
- Distinguish between *alpha*, *beta* and *power*. Understand the relationship between these components of hypothesis testing.