**STAT 200 QUIZ 2 WEEKS 3, 4, 5, 6 (16 @ 0.5 pts = 8 points) SHOW YOUR CALCULATIONS NOT SOFTWARE**

**SUBMIT ANSWER SHEET ONLY, NOT THESE QUIZ PROBLEMS**

**1. For a set of numbers, if the mean is equal to the median, its distribution might be:**

a. Right-skewed

b. Left-skewed

c. Normally distributed

d. Positively-skewed

**2. In the graph, there are two distrubitions and we can tell (Select ALL that apply):**

 

a. The mean of distribution A is greater than the mean of distribution B

b. The mean of distribution A is less than the mean of distribution B

c. The standard deviation of distribution A is less than than the std deviation of distribution B

d. The median of distribution A equals the median of distribution B

**3. (T/F) A BOX PLOT gives us considerable information about a data set, including the number of data points in any given range.**

**4. There are 20 coupons rolled up and placed inside round plastic balls in a box. There are 3 different types of coupons: 10 of them can be redeemed for “free drinks”, 5 can be redeemed for “free desserts”, and 5 can be redeemed for “free entrees”. If you shake the box and then randomly select one ball (with coupon), what’s the probability that you will get a “free entrée” coupon ? (a) 25% (b) 10% (c) 20% (d) 50% (e) None of these**

**5. Mary was tossing a coin. She tossed three times. What’s the probability that at the first toss she gets a head, the second toss she gets a tail at and the third time she get a tail? (a) 3/8 (b) 0.50 (c) 12.5% (d) 25%**

**6. 100,000 people: twenty percent are children and 7% of those children are malnourished. How many children are malnourished? (a) 1000 (b) 1400 (c) 1200 (d) 1600**

**7. A normal distribution of data points has a mean of 15 and a standard deviation of 5. What is the standardized Z-VALUE for a data point with a value of 7? (a) +1.3 (b) -1.6 (c) -2.1 (d) +1.6**

**8. In this data set above, what is the probability that a data point is 7 or less?**

**(a) 4.5% (b) 0.095 (c) 0.055 (d) 55%**

**9. TOSSING A COIN: Using the Normal to approximate the Binomial (NOT the complex formulas). What is the probability of (binomial) data getting 17 to 21 heads out of 36 tosses? THE RANGE FOR WHICH WE DETERMINE THE Z VALUES FOR THE LOW AND HIGH ENDS IS?**

**(a) 17 to 21 (b) 17.5 to 19.5 (c) 16 to 22 (d) 16.5 to 21.5**

**10. What are the MEAN and Standard Deviation approximations we use for this calculation?**

**(a) 18 and 3 (b) 17 and 10 (c) 18 and 9 (d) 16 and 3 (e) None of these**

**11. What are the z-Values that correspond to the range you determined in #9 above?**

**(a) +0.5 and -1.17 (b) -0.5 and +1.17 (c) - 0.16 and +0.38 (d) none of these**

**12. For these z-Values from #11, what are the areas (probabilites) to the LEFT ?**

**(a) 0.3085 and 87.9% (b) 3.85% and 0.0879 (c) 0.4801 and 13% (d) 4.81% and 95.2%**

**13. FINALLY, what is the approximate probability of 17 to 21 heads out of 36 coin tosses using the Normal to approximate the Binomial?**

**(a) 67% (b) 57% (c) 0.43 (d) 0.057 (e) None of these**

**14. CONFIDENCE INTERVALS IF WE HAVE THE MEAN AND THE STANDARD DEVIATION WE USE THE \_\_\_\_\_\_\_, BUT IF WE HAVE THE MEAN AND NOT THE STANDARD DEVIATION WE USE THE \_\_\_\_\_\_\_\_\_**

**(a) z-Tables and t-Tables (b) t-Tables and z-Tables (c) neither, we can’t calculate a confidence interval.**

**15. Using the t-Tables with an α of 5% the Confidence Interval would have limits at:**

**(a) 5% and 95% (b) 0.025 and 0.975 (c) 1% and 99% (d) none of these**

**16. Calculate the 99% Confidence Interval for 41 sample data points with a mean (m) of 25 and a standard deviation (s) of 5 (ROUNDED OFF TO WHOLE NUMBERS)**

**(a) 21 to 29 (b) 23 to 27 (c) 24 to 26 (d) 22 to 28**

**NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**STAT 200 WK6 QUIZ 2 ANSWER SHEET (16 @ 0.5 PTS EACH = 8 POINTS)**

**PUT ANSWERS HERE (AND ANY CALCULATIONS) NOT ON QUESTION PAGES.**

**SUBMIT ONLY THIS PAGE TO THE ASSIGNMENT FOLDER.**

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| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
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| **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** |
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**SHOW WORK HERE:**