Select a proportion or statistic that you are interested in studying. Examples:

1. “Do you watch cartoons?” (proportion)
2. “Do you have an Instagram account?” (proportion)
3. “Which do you prefer, milk or orange juice, as a breakfast drink?” (proportion)
4. “Do you cheat in class?” (proportion)
5. “Do you find females who wear makeup attractive?” (proportion)
6. “Are you pro-choice or pro-life? (proportion)
7. “Do you drink alcohol?” (proportion)
8. “Do you smoke marijuana?” (or have you ever) (proportion)
9. How much time to you normally spend doing homework? (mean)
10. How much time do you normally sleep each night? (mean)
11. “How much time do you spend on social media each day?” (mean)
12. Do a taste test in the hallway after school to see whether students prefer a name brand food or beverage. (I don’t think we can do these in the caf during the school day.)
13. Or even better – you make up your own

Create a **poster** that will include all of the following:

1. What is your parameter of interest? (2.5 pts)

2. What is your population of interest? (2.5 pts)

 3. Give a detailed explanation of how you selected your random sample(s). (5 pts) Your explanation should include the following:

• What was your sample size? Keep in mind the 10% condition. Don’t sample more than 10% of your population. Keep in mind the conditions for normal distribution of the sampling distribution.

4. Explain how you gathered the data. (5 pts.) When and where did you collect your sample? (Keep in mind independence) What is the exact question you asked? (Keep in mind bias)

5. Gather your sample(s). Create a graph of your data. (10 pts)

6. Use the 4-step process to complete the following: (20 points)

a. Construct confidence intervals for 3 different levels. You must show your calculations. Do this using the formula AND using the calculator – your answers should match or almost match.

 b. Choose one interval and describe what the interval means in context.

9. What did you learn from this project? (5 pts) Be specific. Must be at least 3 complete sentences.

50 points total

Due Monday, March 13