Final Exam Questions — Math 121

Some of these questions will be on the final exam!

1. What is the difference between a statistic and a parameter?

2. What is the exact definition of a p-value?

3. Why are low p-values considered statistically significant?

4. When we find a 95% confidence interval for a parameter, what are we 95% sure is true?

5. Why are there two different symbols for averages (μ and $\bar{x}$)?

6. Why is random sampling important?

7. A randomized controlled experiment randomly assigns individuals to different treatment groups. Why is random assignment important?

8. Why are large samples better than small samples?

9. What is the Law of Large Numbers, and what does it have to do with gambling in a casino?

10. How does the sampling distribution for $\bar{x}$ change as the sample size N gets larger?