STAT 305 D Final Exam Topics

1. Random intervals
2. Ch. 6.1, 6.2: One-sample inference (confidence intervals and hypothesis testing) on the mean
   - under each of the following conditions:
     - When $n \geq 25$ and σ^2 is known.
     - When $n \geq 25$ and σ^2 is unknown.
     - When $n < 25$ and σ^2 is unknown.
   - All the above using:
     - Confidence intervals
     - Critical values
     - p-values
3. Ch. 6.3: Inference for paired data under all the conditions in pt 2.
4. Ch. 6.3: Inference for 2-sample data under all the conditions in pt 2 (for each sample), and:
   - when $\sigma_1^2 \approx \sigma_2^2$
   - when $\sigma_1^2 \not\approx \sigma_2^2$
5. Ch. 9.1: Inference for simple linear regression
   - Confidence intervals and hypothesis testing on β_0 and β_1
6. Ch. 9.1: Inference for simple multiple regression
   - Confidence intervals and hypothesis testing on $\beta_0, \ldots, \beta_{p-1}$