Stat 261 Assignment 0

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Due date: May 12, 2023, 11:59 pm

Answer the questions (handwritten on paper or on a tablet or computer file). Create a PDF file of your answers (scan handwritten notes or save tablet notes to pdf). Upload your PDF file to Brightspace.

NOTE: jpeg files are not acceptable.

For each of the following questions, indicate whether the statement is true or false and justify it. (4 points for each question)

1. $\dfrac{\sum_{i=1}^{n} a_i b_i}{\sum_{i=1}^{n} a_i^3} = \sum_{i=1}^{n} \dfrac{b_i}{a_i^2}$

2. $\prod_{i=1}^{n} e^{2y_i} = e^{2 \sum_{i=1}^{n} y_i}$

3. $\ln \left(\prod_{i=1}^{n} \lambda e^{\lambda x_i} \right) = n \ln \lambda + \lambda \sum_{i=1}^{n} x_i$

4. $\sum_{i=1}^{n} 2(x_i + 1) = 2 \left(\sum_{i=1}^{n} x_i \right) + n$

5. $\prod_{i=1}^{n} \rho^{x_i} (1 - \rho)^{k - x_i} = \rho^{\sum_{i=1}^{n} x_i} (1 - \rho)^{k - \sum_{i=1}^{n} x_i}$