

R University

Statistics Exam 2015-01-01

Exam ID 00002

Name: _____

Student ID: _____

Signature: _____

1. .

2. (a) (b) (c) (d) (e)

3. (a) (b) (c) (d) (e)

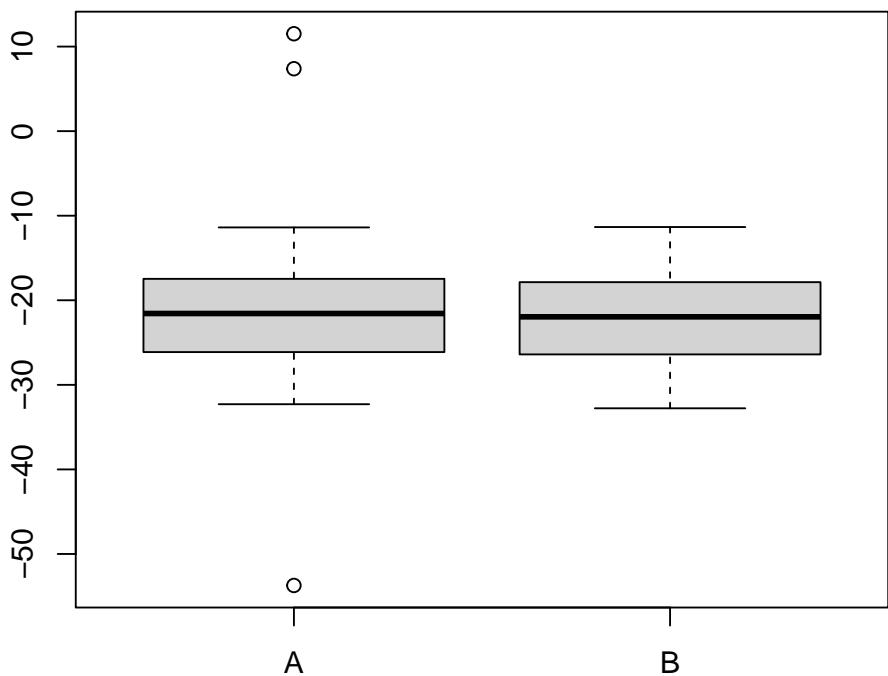
4.

5. (a) (a) (b) (c)

(b) .

1. What is the derivative of $f(x) = x^5 e^{3.5x}$, evaluated at $x = 0.53$?
2. What is the seat of the federal authorities in Switzerland (i.e., the de facto capital)?
 - (a) Geneva
 - (b) Bern
 - (c) Zurich
 - (d) St. Gallen
 - (e) Lausanne
3. In the following figure the distributions of a variable given by two samples (A and B) are represented by parallel boxplots. Which of the following statements are correct? (*Comment: The statements are either about correct or clearly wrong.*)

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- (a) The location of both distributions is about the same.
- (b) Both distributions contain no outliers.
- (c) The spread in sample A is clearly bigger than in B.
- (d) The skewness of both samples is similar.
- (e) Distribution B is about symmetric.
4. What is the name of the R function for extracting the regressor matrix from a fitted (generalized) linear model object?
5. Using the data provided in `regression.csv` estimate a linear regression of y on x and answer the following questions.
 - (a) x and y are not significantly correlated / y increases significantly with x / y decreases significantly with x
 - (b) Estimated slope with respect to x :