

R University

Statistics Exam 2015-01-01

Exam ID 00001

Name: _____

Student ID: _____

Signature: _____

1.

--	--	--	--	--	--

 .

--	--	--

2. (a)

--

 (b)

--

 (c)

--

 (d)

--

 (e)

--

3. (a)

--

 (b)

--

 (c)

--

 (d)

--

 (e)

--

4.

--

5. (a) (a)

--

 (b)

--

 (c)

--

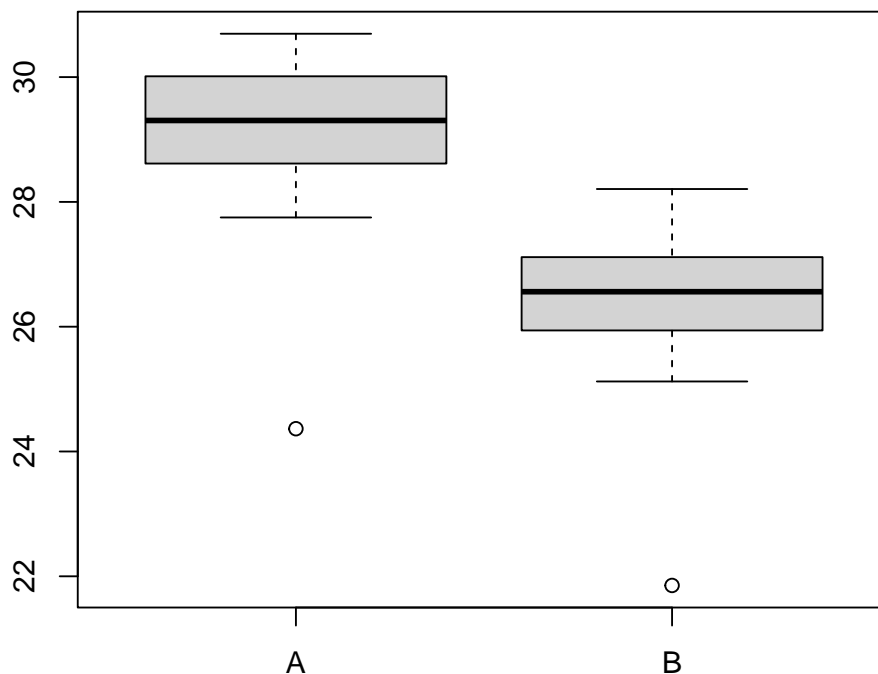
(b)

--	--	--	--	--	--

 .

--	--	--

1. What is the derivative of $f(x) = x^3 e^{3.1x}$, evaluated at $x = 0.69$?
2. What is the seat of the federal authorities in Switzerland (i.e., the de facto capital)?
 - (a) Basel
 - (b) Lausanne
 - (c) Geneva
 - (d) Zurich
 - (e) Bern
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.)*



- (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 left-skewed.
4. What is the name of the R function for extracting the estimated covariance 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 :