

Name: _____

Student ID: _____

Signature: _____

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2. (a)

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 (b)

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 (c)

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 (d)

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 (e)

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3. (a)

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 (b)

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 (c)

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 (d)

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 (e)

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4.

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5. (a) (a)

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 (b)

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 (c)

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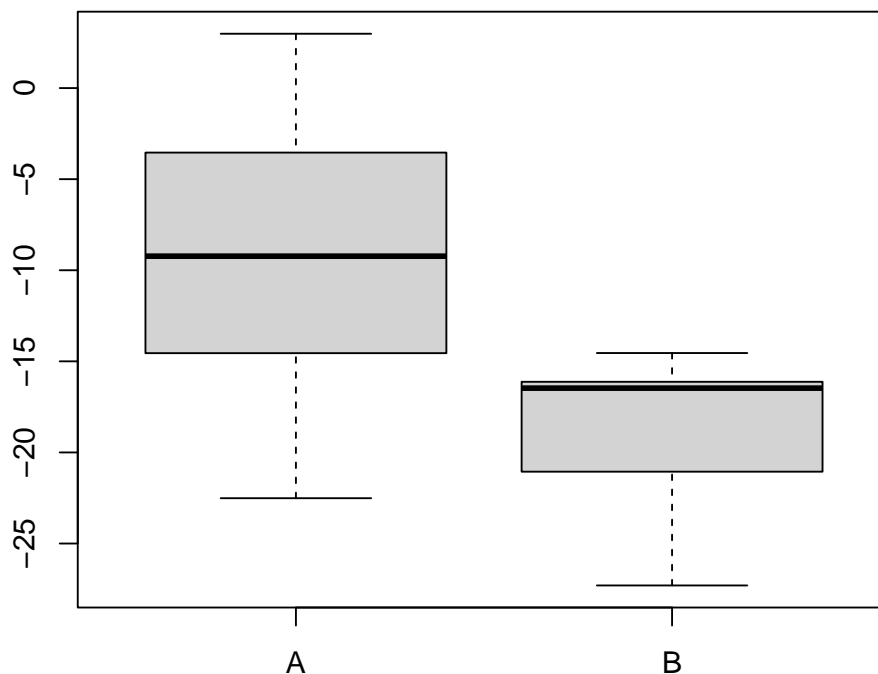
(b)

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1. What is the derivative of $f(x) = x^7 e^{3.4x}$, evaluated at $x = 0.77$?
2. What is the seat of the federal authorities in Switzerland (i.e., the de facto capital)?
 - (a) Bern
 - (b) Lausanne
 - (c) St. Gallen
 - (d) Zurich
 - (e) Basel
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 right-skewed.
4. What is the name of the R function for negative binomial regression?
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 :