

MITx: 14.310x Data Analysis for Social Scientists

Heli



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Question 12 - 14

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Now, imagine that you are considering a similar randomized experiment as the Duflo/Hanna/Ryan camera experiment, except you plan to give teachers lower incentives - half the monetary amount as in the Duflo/Hanna/Ryan experiment.

Question 12

1/1 point (graded)

If you think that the relationship between incentives and the variable **open** is linear, what would be the expected ATE of this new intervention?

Please round your answer to the third decimal place, i.e. if it is 0.3414, please round to 0.341.

0.098

✓ Answer: 0.098

0.098

Explanation

Since we are assuming a linear relationship then half of the incentives should have half of the effect. Then, our estimate would be $\frac{0.1969}{2}=0.09845\approx0.098$

- Module 5: Moments of a Random Variable,
 Applications to Auctions,
 Intro to Regression
- Module 6: Special
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 Central Limit Theorem,
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- Module 7: Assessing and Deriving Estimators - Confidence Intervals, and Hypothesis Testing
- Module 8: Causality,
 Analyzing Randomized
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 Regression

Causality

Finger Exercises due Nov 21, 2016 at 05:00 IST

<u>Analyzing Randomized</u> <u>Experiments</u>

Finger Exercises due Nov 21, 2016 at 05:00 IST

Submit

You have used 1 of 2 attempts

✓ Correct (1/1 point)

Question 13

1.0/1.0 point (graded)

Assume that this value is the minimum ATE such that the intervention is cost-effective. What is the sample size required to have a power of at least 90%, with the following properties?

- with a significance level of 5%
- an equal number of treated and control units
- ullet of the average of the variance of the control and the treatment group in the existing data

a. 100

b. 110

o c. 120

od. 130

<u>Use of Randomization and</u> <u>Nonparametric Regression</u>

Finger Exercises due Nov 21, 2016 at 05:00 IST

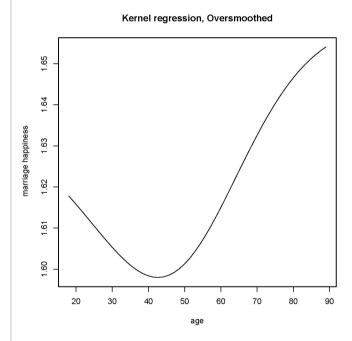
Module 8: Homework

Exit Survey

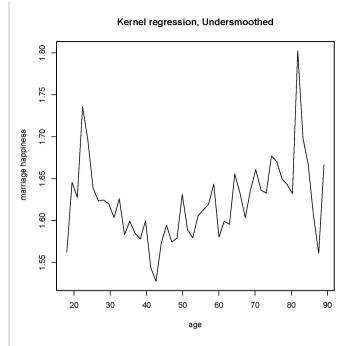
Submit You have used 1 of 2 attempts

Now we are going to consider non parametric regressions. The following plots show three different non-parametric regressions that relates the level of happiness in a marriage with age (where 2 corresponds to "very happy", 1 to "pretty happy", and 0 to "not too happy").

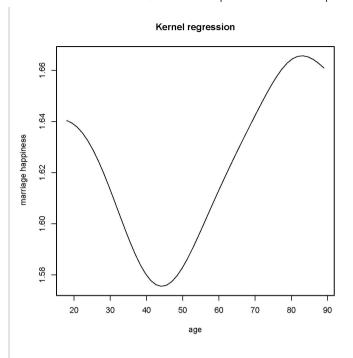
Plot A:



Plot B:



Plot C:

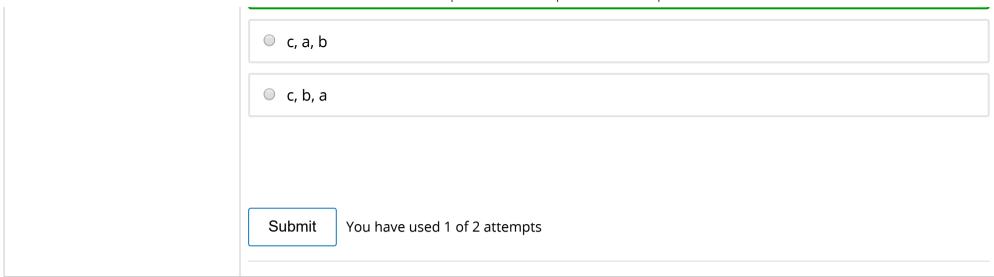


Question 14

1.0/1.0 point (graded)

Rank the three plots from the one with the narrower to the wider bandwidth.

- a, b, c
- a, c, b
- b, a, c
- b, c, a



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