ECON 0150 | Fall 2025 | Homework 4.3

Due: Friday November 14 at 5PM

Homework is designed to both test your knowledge and challenge you to apply familiar concepts in new applications. Answer clearly and completely. You are welcomed and encouraged to work in groups so long as your work is your own. Use the provided datasets to answer the following questions. Then submit your figures and answers to Gradescope.

Q1. Mental Health and Income Group

The 2011 Behavioral Risk Factor Surveillance System (BRFSS) contains individual-level data with the following variables:

- `Mental Health` - *days of Poor Mental Health in the Past 30 Days*

- `Income2` - *annual household income from all sources as a categorical variable defined as follows:*

Value	Value Label
1	Less than $10,000
2	Less than $15,000 ($10,000 to less than $15,000)
3	Less than $20,000 ($15,000 to less than $20,000)
4	Less than $25,000 ($20,000 to less than $25,000)
5	Less than $35,000 ($25,000 to less than $35,000)
6	Less than $50,000 ($35,000 to less than $50,000)
7	Less than $75,000 ($50,000 to less than $75,000)
8	$75,000 or more
77	Don't know/Not sure
99	Refused
BLANK	Not asked or Missing

a) Run a linear regression such that the mental health variable is the outcome variable and the indicator for income less than $10,000 is the predictor variable. Interpret your results.

b) Run a linear regression such that the mental health variable is the outcome variable and the income indicator $75,000 or more is the independent variable. Interpret your results.