

ECON 0150 | Fall 2025 | Homework 2.3

Due: Friday, October 2 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 datafiles to answer the following questions. Then submit your figures and answers to Gradescope.

Q1. Amazon Book Sales

We'll explore the list of 50 bestselling Amazon books each year between 2009 and 2021. Prices are expressed in US dollars and rounded to the nearest dollar.

- a) Who collected this data?
- b) How many bestsellers are fiction books?
- c) How many nonfiction bestsellers cost more than 50 dollars?
- d) How many bestsellers from after 2015 didn't cost anything?

Q2. Filtering Marriage Rates

The following questions are based on **crude marriage rates** — numbers of marriages per one thousand inhabitants — in 1990 and 2019. Each row represents a different European country.

- a) Who collected the data?
- b) Use one sentence to summarize how the source link describes 'Crude Marriage Rate'.
- c) Use a scatterplot to visualize the change in marriage rates between 1990 and 2019.
- d) How many countries in this dataset experienced an increase in their marriage rates between 1990 and 2019?

e) How many countries experienced an extreme marriage rate (greater than 8; less than 4) in 2019?