ECON 2204
Quiz 1

YOUR NAME

February 11, 2026

Instructions

- **Time**: 2:30-3:45 PM
- Complete this quiz **in this Quarto (.qmd) file**.
- Render to **PDF** and submit **both**:
    1. the `.qmd` file, and
    2. the rendered output (the `.pdf` file).
- Unless told otherwise, write your answers **directly under each question**.
- Some questions ask you to use chunk options so that **only results** appear (not code).
- This exam is closed book. No notes, texts, phones, or other study aids are allowed.
- The use of generative AI is strictly prohibited
- You may R's help manual by searching in the **Help** viewer in RStudio

Questions

1. Getting Started [5 Marks]

    (a) Create an R project entitled **econ_2204** and connect it to your GitHub account. Make sure you click **Create git repository**.
    (b) Within the **econ_2204** directory on your local computer, add a new folder called **quiz_1**.
    (c) Add the Quiz 1 files to the **quiz_1** directory.
    (d) Insert the link to your GitHub repository.

2. Quarto Basics

    (a) In the **YAML** at the top of this file, replace `YOUR NAME` with your name. [1 Mark]

(b) Put the following words in the appropriate font:

(i) **Bold** [0.5 Marks]
(ii) *Italics* [0.5 Marks]
(iii) `Code` [0.5 Marks]

3. Write the following equations using LaTeX math syntax so that they render properly. Write them using **display math**. [2 Marks each]

(a) The simple linear regression model:

$$Y_i = \beta_0 + \beta_1 X_i + u_i$$

(b) The sample mean:

$$\bar{X} = \frac{1}{n} \sum_{i=1}^{n} X_i$$

4. Insert an image using **Markdown image syntax**. [5 Marks]

- Use the image in the **uw-logo-centre-stack-black.png** file, but it must render
- Add a caption that reads: **Figure 1: University of Winnipeg Logo**.

5. Insert an R chunk and add an Image Using R. Use the `echo: false` execution option, so that the code does not show in the PDF.

(a) Generate a variable $x = (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)$ [1 Mark]
(b) Generate a variable $y = 2x + 5$ [1 Mark]
(c) Create a simple plot with x on the x-axix and y on the y-axis using the `plot()` function.
(d) Add a figure caption "Simple Plot of X Versus Y" using the quarto execution command `fig-cap`.
(e) Add the label `fig-scatterplot` using the `label` execution command
(f) Reference the plot in a sentence below the plot

6. (a) Create a data frame using `data.frame()` called `students` with columns `name` and `grade` with the following rows:

name	grade
Ana	82
Ben	75
Cara	91
Dan	68

We want the code to print in the PDF, so set `echo: true`. Compute and print the average grade.

6. Commit the finished quiz to your GitHub profile [1 Mark]