

# Session 7: Quarto & Reproducibility — Pen-and-Paper Pair Exercise

PSY 410 | Data Science for Psychology

Name: \_\_\_\_\_ Date: \_\_\_\_\_

*No laptop today? No problem. This handout lets you practice the same skills on paper. Work with a partner who has a laptop and compare your work at the end.*

---

## The task (same as the slide exercise)

Create a Quarto document that:

1. Has a YAML header with your name and title
2. Includes a short introduction (2–3 sentences)
3. Has a code chunk that loads `tidyverse` and a dataset
4. Creates a visualization
5. Uses inline code to report a summary statistic
6. Renders to HTML

## Your pen-and-paper version

Since Quarto is about *document structure*, this exercise translates well to paper. Write out the document by hand.

**Step 1: Write the YAML header.** Fill in the blanks:

```
---
title: "_____"
author: "_____"
date: "_____"
format: _____
---
```

**Step 2: Write an introduction section.** Use markdown heading syntax. Write 2–3 sentences about what the report will cover. (Use the `mpg` dataset as your topic.)

```
## _____
```

```
-----
-----
-----
```

**Step 3: Write a code chunk.** What's the correct syntax to start and end a code chunk in Quarto?

```
```${_}`
library(_____)

ggplot(mpg, aes(x = _____, y = _____)) +
  geom_point() +
  labs(
    x = "_____",
    y = "_____"
  )
```
```

**Step 4: Write a sentence with inline code.** Fill in the blank to report the mean highway MPG:

The mean highway fuel economy is ``r _____(_____(mpg$hw), 1)`` miles per gallon.

**Step 5: Label the parts.** In the margin of your handwritten document, label each section: - [ ] YAML header - [ ] Markdown text (narrative) - [ ] Code chunk (executable R code) - [ ] Inline code (embedded in text)

---

### **Check your work**

Compare your handwritten document with your partner's rendered version. Do your YAML header, code chunk, and inline code match?