

Learning Goals

- Understand the concept of reproducibility and why it is essential for communicating data results.
- Create an RMarkdown file and recognize its basic components, including the YAML header and R code chunks.
- Write clear narrative explanations outside of code chunks and use them to support understanding of code and output.
- Use the Knit feature to compile an RMarkdown file into a Word or HTML document that combines code, output, and commentary.

Key Terms

For each of the following terms below, write down a brief definition and/or explanation.

- **Reproducibility:**

- **R Script:**

- **RMarkdown:**

- **YAML Header:**

- **R Code Chunk:**

- **Knit:**

- **Output Document:**

Key Concepts

1. Why is reproducibility important in data science?
2. Where should our code go and where should our explanations/insights go?
3. What does it mean to knit an RMarkdown document?
4. Why should we usually write and run code one line at a time instead of writing many lines and hoping they all work at once?
5. Suppose your RMarkdown document will not knit. What are the two most common issues you should check before asking for help?

Practice Problems

1. Write an R code chunk that creates the following vector and calculates its mean:

```
scores <- c(82, 91, 75, 88, 94)
```

2. Create a header called **Results** using RMarkdown formatting.
3. Write one word in **bold** and one word in *italics* using RMarkdown formatting.