Day 1 Mini Problem Set for R Tutorial

Your Name

Date

Introduction

Try to solve each problem using day one's material and some minimal Googling. If you get stuck, please come to office hours which are 2-5pm in 301 prospect, room 101.

Remember to consider writing pseudo code prior to trying to code your answer to the problem!

This problem set should take 1-2 hours. If you feel like you're struggling through getting things to click, don't get discouraged. Struggling through a problem is the best way to learn it! (If it starts to get discouraging, come to office hours!)

Problem 1: Basic Operations

Create two numeric variables with any values and perform basic arithmetic operations (addition, subtraction, multiplication, division) on them.

Assign the result of a division to a new variable and print it.

```
# Insert code here
```

Problem 2: Working with Vectors

Create a numeric vector with at least 5 elements. Compute the sum (`sum()`) and mean (`mean()`) of the vector.

Use a logical comparison (true/false) within a for-loop to print if an element of the vector is greater than the mean. You may need to use the `print()` command.

```
# Insert code here
```

Problem 3: Basic Data Frame Manipulation

Create a data frame with at least 3 columns and 5 rows. The columns should include a mix of numeric, character, and logical data types. Print the entire data frame. Print only the second column of the data frame.

```
# Insert code here
```

Problem 4: Loop and Function

Write a function that takes a numeric input and returns the square of the number.

Use a for loop to apply this function to each element of a numeric vector that you create.

Store the results in a new vector that you first initialize by running `newVec <- rep(NA, 5)`. Print the new vector using the `print()` command.

```
# Insert code here
```

Problem 5: Conditional Logic

Using the data frame created in Problem 3, write an if statement inside a loop to perform the following conditional operation on the numeric variable you created: if a number in a numeric column is even, replace it with half its value.

Print the modified data frame.

Practicing Googling to figure out how to code if a number is even or not.

```
# Insert code here
```

Problem 6: Reflect

Write a brief reflection (1-3 sentences) on what you found challenging and what you learned from this problem set.