Data Science Module 5 Exercises

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9: Statistical Foundations

9.3: Simulations

Exercise 1:

```
# A
sample_mean_vec <- c()

for(i in 1:1000) {
    sim_sample <- rnorm(n = 10, mean = 50, sd = 15)
    sample_mean_vec <- c(sample_mean_vec, mean(sim_sample))
}</pre>
```

The mean of the sample mean vector is approximately 49.96, ## and the standard error of the vector is approximately 4.531.