

Quiz 4

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Problem 4: The number of daily shoppers at target is uniformly distributed between 20 and 30+y.

How many shoppers should the target expect to see tomorrow? In other words, what is the expected value of the number of shoppers at Target tomorrow?

```
set.seed(123)
n_days <- 100000000

# Simulate the number of shoppers each day from a uniform distribution U(20, 42)
shoppers <- runif(n_days, min = 20, max = 42)

# Calculate the average (expected) number of shoppers based on the simulation
simulated_expected_shoppers <- mean(shoppers)
cat("Simulated Expected Number of Shoppers:", simulated_expected_shoppers, "\n")
```

```
## Simulated Expected Number of Shoppers: 30.99973
```