# Probability & Statics

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## Exercise

```r
# Create a vector with the observed number of purchases for each snack type
observed_snacks <- c(A = 120, B = 95, C = 85, D = 100)

# Perform the Chi-squared
chisq.test_result_exercise <- chisq.test(observed_snacks)

# Print the test result to the console
print("Test Result")
print(chisq.test_result_exercise)
```

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> # Create a vector with the observed number of purchases for each snack type
> observed_snacks <- c(A = 120, B = 95, C = 85, D = 100)
> # Perform the Chi-squared
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> # Perform the Chi-squared
> chisq.test_result_exercise <- chisq.test(observed_snacks)
`
```

```r
# The p-value from the test is 0.0901.
# Since the p-value (0.0901) is greater than the significance level (alpha = 0.05),
# we fail to reject the null hypothesis.

# CONCLUSION:
# At the 5% significance level, there is not enough statistical evidence to reject the
# vending machine owner's claim. Although the observed number of purchases for each
# snack type is not identical, the variation is not statistically significant. Therefore,
# the data is consistent with the claim that customers choose the four snack types with equal probability.
```