Chi-squared Test

Chi-square test on Percentage of Faculty Rank

```
rank_sample <- c(24, 28, 48)
rank_population <- c(27.6, 30.3, 42.1)

Rank <- data.frame(rank_sample, rank_population)
Rank_test <- chisq.test(Rank)
Rank_test
```

```
##
##  Pearson's Chi-squared test
##
## data:  Rank
## X-squared = 0.72825, df = 2, p-value = 0.6948
```

Chi-square test on Percentage of Gender

```
gender_sample <-c(31, 69)
gender_population <-c(35.3, 64.7)
Gender <- data.frame(gender_sample, gender_population)
# Gender_test <- chisq.test(gender_sample, gender_population)
Gender_test <- chisq.test(Gender)
Gender_test
```

```
##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  Gender
## X-squared = 0.2457, df = 1, p-value = 0.6201
```

Chi-square test Percentage of Gender on different Faculty Rank

```
sample_FR_G = c(9, 15, 11, 17, 11, 37)
population_FR_G = c(11.9, 15.7, 11.9, 18.4, 11.5, 30.6)

Data_s_p <- data.frame(sample_FR_G, population_FR_G)

# faculty_gender <- chisq.test(sample_FR_G, population_FR_G)
faculty_gender <- chisq.test(Data_s_p)
faculty_gender
```

```
##
##  Pearson's Chi-squared test
##
## data:  Data_s_p
## X-squared = 1.1261, df = 5, p-value = 0.9518
```