```
# Define the proportions of tea drinkers before and after the increase in duty
p1 <- 800/1000
p2 <- 800/1200

# Perform the hypothesis test using the prop.test function
result <- prop.test(c(800, 800), c(1000, 1200), correct = FALSE)

# Extract the p-value from the result
p_value <- result$p.value

# Check if the p-value is less than the significance level (0.05)
if (p_value < 0.05) {
  print("There is a significant decrease in consumption of tea after the increase in the exercise duty.")
}
else {
  print("There is not a significant decrease in consumption of tea after the increase in the exercise duty.")
}
```

The prop.test function takes three arguments: the number of successful trials (tea drinkers), the number of total trials (sample size), and correct = FALSE to indicate that the sample proportions are not corrected for continuity.
The result object contains various test statistics, such as the estimated difference in proportions, the standard error of the difference, and the p-value. If the p-value is less than the significance level (0.05), you can reject the null hypothesis that there is no difference in the proportions of tea drinkers before and after the increase in duty, and conclude that there is a significant decrease in consumption of tea after the increase in the exercise duty.

8) Use R for test the given data
A health status survey in a few villages revealed that the normal serum protein value of children in that locality is 7.0 g/100ml. A group of 16 children who received high protein food for a period of six months
had serum protein values shown below. Can we consider that the mean serum protein level of those who
were fed on high protein diet is different from that of the general population?
S.No. (Child No.) 1 2 3 4 5 6 7 8
Protein level (g%) 7.10 7.70 8.20 7.56 7.05 7.08 7.21 7.25
S.No. (Child No.) 9 10 11 12 13 14 15 16
Protein level (g%) 7.36 6.59 6.85 7.90 7.27 6.56 7.93 8.56

To determine if the mean serum protein level of the children who received a high protein diet is significantly different from the normal level of 7.0 g/100ml in the general population, you can perform a t-test.
Here's how you can perform the t-test in R:

```
# Define the protein levels of the children who received the high protein diet
protein_levels <- c(7.10, 7.70, 8.20, 7.56, 7.05, 7.08, 7.21, 7.25, 7.36, 6.59, 6.85, 7.90, 7.27, 6.56, 7.93, 8.56)

# Perform the t-test using the t.test function
result <- t.test(protein_levels, mu = 7.0)

# Extract the p-value from the result
p_value <- result$p.value
```