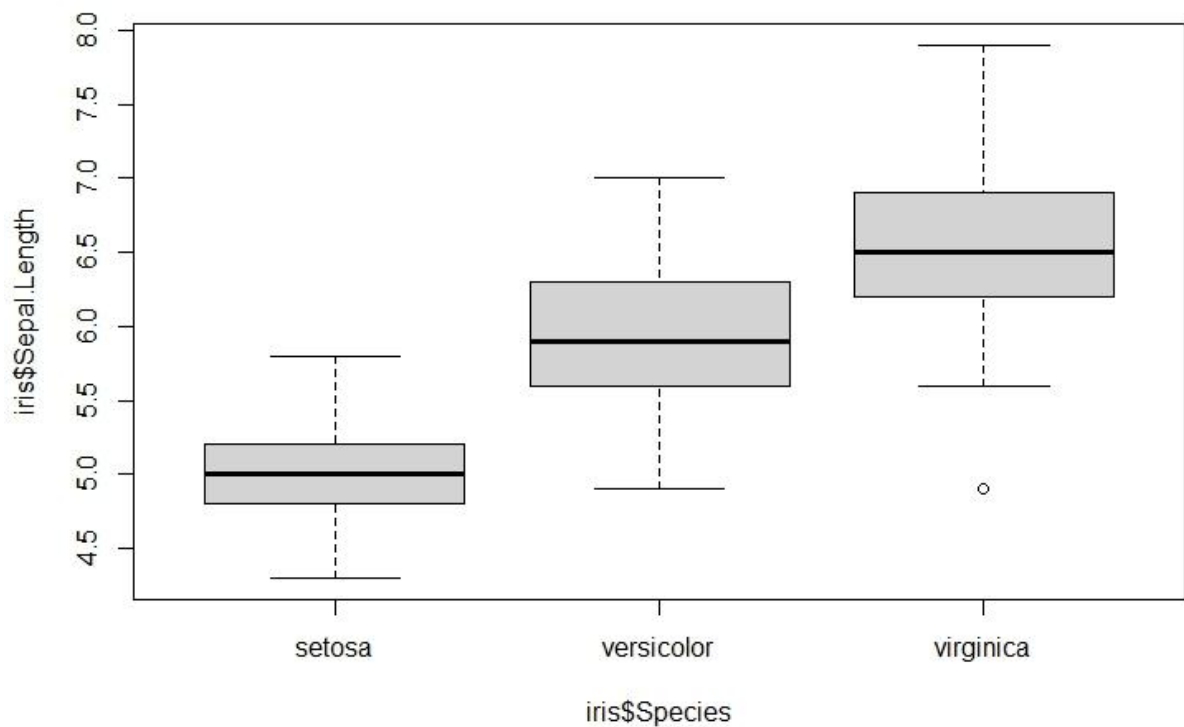


1. Setosa
2. ~5cm
3.  $5.0060 + 1.5820 = 6.588$   
`virginica = subset (iris, Species == "virginica")`  
`mean(virginica$Sepal.Length)`



4. Yes, they meet the criteria for normality. The p-value for the shapiro test is above the alpha level, allowing us to reject the null hypothesis that the data is non-normally distributed.
5. Yes, we determined that a linear model is appropriate for this data. The relationship between the values is linear and has normally distributed residuals.
6. ~2.23 cm
7.  $4 \times 2.23 = \sim 8.92\text{cm}$
8. Yes, this model meets the criteria for normality. The p-value for the shapiro test is above the alpha level, allowing us to reject the null hypothesis that the data is non-normally distributed.

