One Sample t-Test

Example: In a study, one wishes to test whether the average test scores is significantly different from 6 or not, at 5% level of significance, using a sample 10 data values as shown in the Data Editor?

1) Enter your data into a new data table. Test for normality first. (Check the instruction for normality test.)

2) Perform the following menu selections:

3) Then fill in the information that was given by the problem. For the null hypothesis that the mean is 6, put value 6 in the **Null hypothesis: mu =** box. Since the goal is for testing whether there is significant difference, one should choose Population mena = mu0 for choose two-tailed test, and click **OK**.

R Output:

```
      One Sample t-test

data:  Dataset$var1
t = -1.7111, df = 9, p-value = 0.1212
alternative hypothesis: true mean is not equal to 6
95 percent confidence interval:
 3.910125 6.289875
sample estimates:
mean of x
      5.1
```

4) Interpret the result: The p-value is 0.1212 and it is greater than .05, the 5% level of significance. Therefore, there **is no sufficient evidence** to support the alternative hypothesis that the mean is significant difference from 60.