**LAB**

**USE EITHER OF THE DATA and do these questions by hand. Use a calculator to complete tables and answer the following questions:**

Example Is the number of hours of work in a student life affecting the number of time spent with family in a day.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| X | Y | XiYi | Xi2 |  |  |  |
| 2 | 3 |  |  |  |  |  |
| 3 | 1 |  |  |  |  |  |
| 1 | 1 |  |  |  |  |  |
| 4 | 1 |  |  |  |  |  |
| 2 | 3 |  |  |  |  |  |
| 1 | 1 |  |  |  |  |  |

**OR**

Is the number of hours/day of study affecting the GPA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| X | Y | XiYi | Xi2 |  |  |  |
| 5 | 3.5 |  |  |  |  |  |
| 6 | 3.8 |  |  |  |  |  |
| 3 | 3.1 |  |  |  |  |  |
| 7 | 4 |  |  |  |  |  |
| 4 | 3.2 |  |  |  |  |  |
| 2 | 3 |  |  |  |  |  |

1. Find the Fitted Equation for Least Square estimation also is there a relationship between the two variables? Alpha=.05

STEP 1 Evaluate A and B

 and 

Then substitute to find the fitted equation 

Step 2 Find , ,  and then find  and 

Find the t test  where an easier formula for sxx is 



Step 3 Formulate the Null and Alternate Hypothesis. Find tcritical statistics (use degree of freedom and alpha) and observe whether the t test is in the region of rejection or acceptance.