Probability & Statistics:

Resolve the following problems of regression and ANOVA. Please use the statistics program to resolve the problems below. Please explain your answers.

**Problem 1:**

Six samples of four types of milk were analyzed to determine protein content. The results where the following (ug/mL):

Tres Monjitas® 5.2 4.5 6.0 6.1 6.7 5.8

Suiza Dairy®  6.5 8.0 6.1 7.5 5.9 5.6

Mayagüez Dairy® 5.8 4.7 6.4 4.9 6.0 5.2

Indulac® 8.3 6.1 7.8 7.0 5.5 7.2

Using the ANOVA method at a significance level of 0.05, test if there exist a difference between the content percent of protein of the different labels of milk above.

**Problem 2:**

In water treatment plants the level of turbidity (y), is suspected that is linear to the relation of inches of rain water accumulated through the month, (x). The following information of the water treatment plant is available as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Level of Turbidity (*y*)** | 1 | 2 | 3 | 4 | 5 | 6 |
| **Inches of rain water (*x*)** | 5.6 | 4.6 | 4.5 | 3.7 | 3.2 | 2.7 |

1. Find the linear equation using the square method minimum which best describes the data above.
2. Calculate the correlation coefficient.