

**DESIGN AND DATA ANALYSIS II IN PSYCHOLOGY. LESSONS 1-3.
November, 2010**

Name: _____
Number of identification: _____

1. The relationship between the school failure (X) and the level of self-esteem (Y) in students between 12 and 15 years-old. As a result, the following table is obtained:

	Coeficientes no estandarizados		Coeficientes estandarizados	t	Sig.
	B	Error típ.	Beta		
(Constante)	13.623	.611		22.308	.000
X	-.726	.059	-.975	-12.318	.000

a Variable dependiente: Y

- Determine the regression equation in raw scores.
 - Which is the estimated level of self-esteem in a student who presents 3 points in school failure?
 - Calculate the goodness of fit and interpret the result taking into account the variables used in this case.
 - Are there statistically significant relationship between the school failure and the level of self-esteem. Justify your answer ($\alpha=0.05$).
2. We studied the satisfaction with their jobs (Y) in 5 graduates ($X=0$) and 5 non-graduates ($X=1$). The results were the following:

X	Y
0	8
0	9
0	5
0	4
0	3
1	2
1	6
1	8
1	7
1	9

- Calculate the regression equation.
- Which is the difference in satisfaction across graduates and non-graduates?

3. A psychologist wants to analyze the influence of aggressive contents in videotapes on the number of students' disruptive behavior in class. A random sample of 10 students of fourth degree in primary school saw in a first moment a video with explicit aggressive contents and the following day the same sample saw another video without any explicit aggressive content. In the following table you'll find the number of students' disruptive behaviors in class after viewing videos in two moments.

	Students									
	A	B	C	D	E	F	G	H	I	J
Number of Disruptive Behaviors (moment 1)	5	7	9	8	6	7	5	4	2	3
Number of Disruptive Behaviors (moment 2)	4	6	8	9	5	5	4	3	2	2

Knowing that normal distribution cannot be assumed; at the level of 95% of confidence; are there any differences in disruptive behaviors after watching videotapes with and without explicit aggressive contents?

4. A clinical psychologist applied a new therapy to improve anxiety symptoms in 10 of his depressive patients. He compared anxiety levels of these patients with the level of anxiety of 10 previous depressive patients with traditional therapy. In the following table anxiety levels of both groups are presented.

	New Therapy (group 1)	Traditional therapy (group 2)
Anxiety levels	8	7
	7	6
	7	7
	8	8
	9	10
	11	13
	14	16

Parametric assumptions are assumed and variances are considered equal. Are there statistical differences in anxiety levels between groups? ($\alpha=0.05$)