

Ch8-Ex1- University grades (univ) as a function of cognitive ability (abil) and study time (stdy).

*Categorical: C.

TTEST VARI = univ /GROUP = ab2.

	ab2	N	Mean	Std. Deviation	Std. Error Mean
univ	1	18	63.50	6.802	1.603
	2	18	67.94	7.573	1.785

t-test for Equality of Means					
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
univ	-1.852	34	.073	-4.444	2.399

GLM univ BY ab2.

Dependent Variable: univ

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
ab2	177.778	1	177.778	3.432	.073
Error	1761.444	34	51.807		
Corrected Total	1939.222	35			

REGRESS /DEP = univ /ENTER ab2 /SAVE PRED(prdu.a) RESI(resu.a).

Model	R	R Square
1	.303	.092

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	177.778	1	177.778	3.432	.073
	Residual	1761.444	34	51.807		
	Total	1939.222	35			

Model	Unstandardized Coefficients				
		B	Std. Error	t	Sig.
1	(Constant)	59.056	3.794	15.567	.000
	ab2	4.444	2.399	1.852	.073

	Mean	Std. Deviation	N
Predicted Value	65.72	2.254	36
Residual	.000	7.094	36

```
VARI LABEL prdu.a ' resu.a '.
LIST.
SUBJ abil stdy hs univ ab2      prdu.a      resu.a
  1   69  26  50  59  1   63.50000   -4.50000
  2   75  30  70  63  1   63.50000    -.50000
  3   79  29  68  66  1   63.50000    2.50000
...
 19   97  23  60  67  2   67.94444   -.94444
 20   98  25  74  84  2   67.94444   16.05556
 21  100  21  60  59  2   67.94444   -8.94444
...
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```
*Categorical: C N; groups diff on study time.
TTEST VARI = stdy /GROUP = ab2.
```

ab2		N	Mean	Std. Deviation	Std. Error Mean
stdy	1	18	22.17	4.866	1.147
	2	18	18.67	4.740	1.117

t-test for Equality of Means					
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
stdy	2.186	34	.036	3.500	1.601

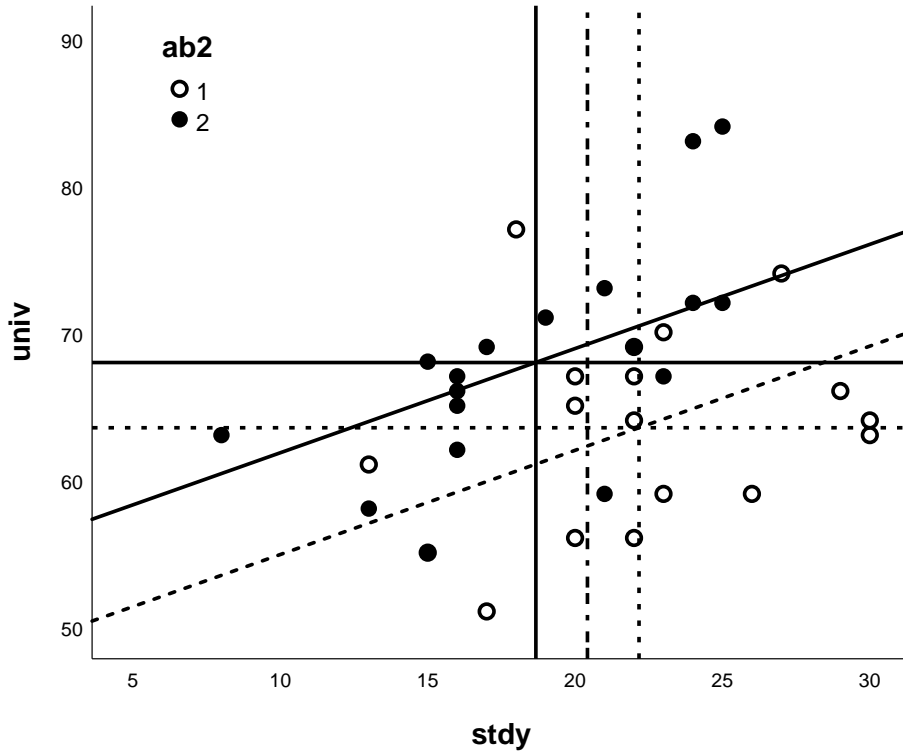
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REGRESS /DEP = univ /ENTER ab2 stdy.
```

Model	R	R Square
1	.543	.295

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	572.069	2	286.034	6.904	.003
	Residual	1367.153	33	41.429		
	Total	1939.222	35			

Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
1	(Constant)	40.859	6.804			6.005	.000
	ab2	6.926	2.291	.472		3.023	.005
	stdy	.709	.230	.482		3.085	.004

```
GRAPH /SCATTERPLOT(BIVAR)=stdy WITH univ BY ab2 /MISSING=LISTWISE.
```



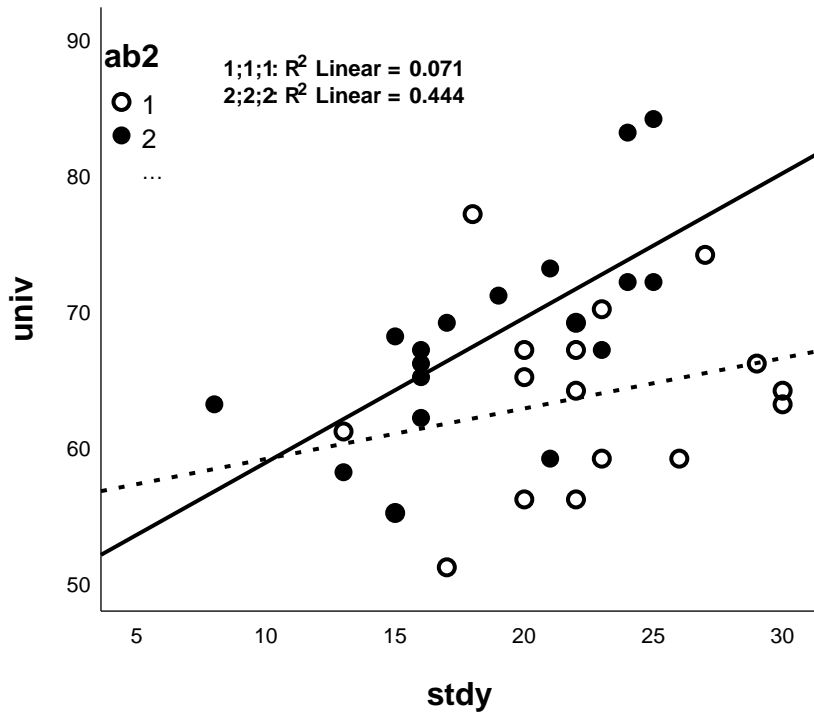
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*Categorical: C, C N, C N CxN.
COMPUTE axs = ab2*stdy.
REGRESS /DEP = univ /ENTER ab2 stdy axs.
```

Model	R	R Square
1	.586	.344

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	666.232	3	222.077	5.583	.003
	Residual	1272.990	32	39.781		
	Total	1939.222	35			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	62.461	15.543		4.019	.000
	ab2	-7.194	9.448	-.490	-.761	.452
	stdy	-.322	.707	-.219	-.455	.652
	axs	.693	.451	.996	1.539	.134

```
GRAPH /SCATTERPLOT(BIVAR)=stdy WITH univ BY ab2 /MISSING=LISTWISE.
```



SPLIT FILE BY ab2.
REGRESS /DEP = univ /ENTER stdy.

ab2	Model	R	R Square
1	1	.266	.071
2	1	.666	.444

ab2	Model		Sum of Squares	df	Mean Square	F	Sig.
1	1	Regression	55.529	1	55.529	1.215	.287
		Residual	730.971	16	45.686		
		Total	786.500	17			
2	1	Regression	432.926	1	432.926	12.780	.003
		Residual	542.018	16	33.876		
		Total	974.944	17			

ab2	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
1	1	(Constant)	55.267	7.636		7.238	.000
		stdy	.371	.337	.266	1.102	.287
2	1	(Constant)	48.072	5.726		8.396	.000
		stdy	1.065	.298	.666	3.575	.003

SPLIT FILE OFF.