SAS Log

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NOTE: SAS (r) Proprietary Software Release 8.2 (TS2M0)
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NOTE: This session is executing on the WIN_PRO  platform.



NOTE: SAS initialization used:
      real time           1.03 seconds
      cpu time            0.71 seconds

1     data temp;
2     input intell senility;
3     cards;

NOTE: The data set WORK.TEMP has 54 observations and 2 variables.
NOTE: DATA statement used:
      real time           0.01 seconds
      cpu time            0.01 seconds


58    ;
59
60    proc means;
61    var intell senility;
62    run;

NOTE: There were 54 observations read from the data set WORK.TEMP.
NOTE: PROCEDURE MEANS used:
      real time           0.01 seconds
      cpu time            0.01 seconds


63    proc logistic order=data;
64    model senility=intell/rsquare;
65    output out=outprob prob=predprob;
66    run;

NOTE: PROC LOGISTIC is modeling the probability that senility=1.
```

```
NOTE: Convergence criterion (GCONV=1E-8) satisfied.
NOTE: There were 54 observations read from the data set WORK.TEMP.
NOTE: The data set WORK.OUTPROB has 54 observations and 4 variables.
NOTE: PROCEDURE LOGISTIC used:
      real time           0.03 seconds
      cpu time            0.03 seconds


67   proc print data=outprob;
68   run;

NOTE: There were 54 observations read from the data set WORK.OUTPROB.
NOTE: PROCEDURE PRINT used:
      real time           0.01 seconds
      cpu time            0.01 seconds
```

SAS Listing

The MEANS Procedure

Variable	N	Mean	Std Dev	Minimum	Maximum
intell	54	11.5740741	3.7092534	4.0000000	20.0000000
senility	54	0.2592593	0.4423430	0	1.0000000

The LOGISTIC Procedure

Model Information

Data Set	WORK.TEMP
Response Variable	senility
Number of Response Levels	2
Number of Observations	54
Model	binary logit
Optimization Technique	Fisher's scoring

Response Profile

Ordered Value	senility	Total Frequency
1	1	14
2	0	40

Probability modeled is senility=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	63.806	55.017
SC	65.795	58.995
-2 Log L	61.806	51.017

R-Square 0.1811 Max-rescaled R-Square 0.2657

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	10.7889	1	0.0010
Score	9.7954	1	0.0017
Wald	8.0570	1	0.0045

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	2.4040	1.1918	4.0687	0.0437
intell	1	-0.3235	0.1140	8.0570	0.0045

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
intell	0.724	0.579	0.905

Association of Predicted Probabilities and Observed Responses

Percent Concordant	74.8	Somers' D	0.563
Percent Discordant	18.6	Gamma	0.602
Percent Tied	6.6	Tau-a	0.220
Pairs	560	c	0.781

Obs	intell	senility	_LEVEL_	predprob
1	9	1	1	0.37573
2	13	1	1	0.14163
3	6	1	1	0.61369
4	8	1	1	0.45408
5	10	1	1	0.30338
6	4	1	1	0.75211
7	14	1	1	0.10665
8	8	1	1	0.45408

9	11	1	1	0.23962
10	7	1	1	0.53478
11	9	1	1	0.37573
12	7	1	1	0.53478
13	5	1	1	0.68706
14	14	1	1	0.10665
15	13	0	1	0.14163
16	16	0	1	0.05883
17	10	0	1	0.30338
18	12	0	1	0.18568
19	11	0	1	0.23962
20	14	0	1	0.10665
21	15	0	1	0.07952
22	18	0	1	0.03169
23	7	0	1	0.53478
24	16	0	1	0.05883
25	9	0	1	0.37573
26	9	0	1	0.37573
27	11	0	1	0.23962
28	13	0	1	0.14163
29	15	0	1	0.07952
30	13	0	1	0.14163
31	10	0	1	0.30338
32	11	0	1	0.23962
33	6	0	1	0.61369
34	17	0	1	0.04327
35	14	0	1	0.10665
36	19	0	1	0.02313
37	9	0	1	0.37573
38	11	0	1	0.23962
39	14	0	1	0.10665
40	10	0	1	0.30338
41	16	0	1	0.05883
42	10	0	1	0.30338
43	16	0	1	0.05883
44	14	0	1	0.10665
45	13	0	1	0.14163
46	13	0	1	0.14163
47	9	0	1	0.37573
48	15	0	1	0.07952
49	10	0	1	0.30338
50	11	0	1	0.23962
51	12	0	1	0.18568
52	4	0	1	0.75211
53	14	0	1	0.10665
54	20	0	1	0.01685