

## SAS Log

NOTE: Copyright (c) 2002-2003 by SAS Institute Inc., Cary, NC, USA.  
NOTE: SAS (r) 9.1 (TS1M2)  
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NOTE: This session is executing on the XP\_PRO platform.

NOTE: SAS initialization used:  
real time 5.45 seconds  
cpu time 1.54 seconds

```
1 libname in v8 'c:\data\mysas';  
NOTE: Libname IN refers to the same physical library as TEMP.  
NOTE: Libref IN was successfully assigned as follows:  
Engine: V8  
Physical Name: C:\Data\mysas
```

```
2  
3 data temp; set in.gss98;  
4  
5 if age=99 then age=.;  
6 age2=age**2; /*creating age-squared var*/  
7  
8 rrincom=.;  
9 if rincom98=1 then rrincom=500;  
10 else if rincom98=2 then rrincom=2000;  
11 else if rincom98=3 then rrincom=3500;  
12 else if rincom98=4 then rrincom=4500;  
13 else if rincom98=5 then rrincom=5500;  
14 else if rincom98=6 then rrincom=6500;  
15 else if rincom98=7 then rrincom=7500;  
16 else if rincom98=8 then rrincom=9000;  
17 else if rincom98=9 then rrincom=11250;  
18 else if rincom98=10 then rrincom=13750;  
19 else if rincom98=11 then rrincom=16250;  
20 else if rincom98=12 then rrincom=18750;  
21 else if rincom98=13 then rrincom=21250;  
22 else if rincom98=14 then rrincom=23750;  
23 else if rincom98=15 then rrincom=27500;  
24 else if rincom98=16 then rrincom=32500;  
25 else if rincom98=17 then rrincom=37500;  
26 else if rincom98=18 then rrincom=45000;  
27 else if rincom98=19 then rrincom=55000;  
28 else if rincom98=20 then rrincom=67500;  
29 else if rincom98=21 then rrincom=82500;  
30 else if rincom98=22 then rrincom=99500;  
31 else if rincom98=23 then rrincom=110000;  
32 else rrincom=.;  
33
```

NOTE: Missing values were generated as a result of performing an operation on missing values.  
Each place is given by: (Number of times) at (Line):(Column).  
4 at 6:9

NOTE: There were 2832 observations read from the data set IN.GSS98.  
NOTE: The data set WORK.TEMP has 2832 observations and 862 variables.  
NOTE: DATA statement used (Total process time):  
real time 6.21 seconds  
cpu time 0.50 seconds

```
34 proc freq;  
35 table rincom98 rrincom;  
36 run;
```

NOTE: There were 2832 observations read from the data set WORK.TEMP.  
NOTE: PROCEDURE FREQ used (Total process time):  
real time 0.32 seconds  
cpu time 0.06 seconds

```
37
38 proc corr data=temp nomiss;
39 var age age2 rrincom;
40 run;
```

```
NOTE: PROCEDURE CORR used (Total process time):
      real time          0.15 seconds
      cpu time           0.10 seconds
```

```
41
42 proc reg data=temp simple;
43 model rrincom=age age2/stb;
44 run;
```

45

```
NOTE: PROCEDURE REG used (Total process time):
      real time          0.50 seconds
      cpu time           0.06 seconds
```

```
46 proc sort;
47 by sex;
48 run;
```

```
NOTE: There were 2832 observations read from the data set WORK.TEMP.
NOTE: The data set WORK.TEMP has 2832 observations and 862 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          5.54 seconds
      cpu time           0.50 seconds
```

```
49
50 proc reg simple;
51 model rrincom=age age2/stb;
52 by sex;
53 run;
```

```
NOTE: Interactivity disabled with BY processing.
NOTE: PROCEDURE REG used (Total process time):
      real time          0.18 seconds
      cpu time           0.10 seconds
```

SAS Listing

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The FREQ Procedure

Respondents income

RINCOM98	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	42	2.06	42	2.06
2	42	2.06	84	4.13
3	40	1.97	124	6.10
4	27	1.33	151	7.42
5	32	1.57	183	9.00
6	43	2.11	226	11.11
7	41	2.02	267	13.13
8	63	3.10	330	16.22
9	110	5.41	440	21.63
10	89	4.38	529	26.01
11	92	4.52	621	30.53
12	106	5.21	727	35.74
13	127	6.24	854	41.99
14	111	5.46	965	47.44
15	160	7.87	1125	55.31
16	169	8.31	1294	63.62
17	107	5.26	1401	68.88
18	178	8.75	1579	77.63
19	109	5.36	1688	82.99
20	64	3.15	1752	86.14
21	37	1.82	1789	87.95
22	20	0.98	1809	88.94
23	40	1.97	1849	90.90
24	118	5.80	1967	96.71
98	26	1.28	1993	97.98
99	41	2.02	2034	100.00

Frequency Missing = 798

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The FREQ Procedure

rrincom	Frequency	Percent	Cumulative Frequency	Cumulative Percent
500	42	2.27	42	2.27
2000	42	2.27	84	4.54
3500	40	2.16	124	6.71
4500	27	1.46	151	8.17
5500	32	1.73	183	9.90
6500	43	2.33	226	12.22
7500	41	2.22	267	14.44
9000	63	3.41	330	17.85
11250	110	5.95	440	23.80
13750	89	4.81	529	28.61
16250	92	4.98	621	33.59
18750	106	5.73	727	39.32
21250	127	6.87	854	46.19
23750	111	6.00	965	52.19
27500	160	8.65	1125	60.84
32500	169	9.14	1294	69.98
37500	107	5.79	1401	75.77
45000	178	9.63	1579	85.40
55000	109	5.90	1688	91.29
67500	64	3.46	1752	94.75
82500	37	2.00	1789	96.76
99500	20	1.08	1809	97.84
110000	40	2.16	1849	100.00

Frequency Missing = 983  
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The CORR Procedure

3 Variables: AGE age2 rrincom

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
AGE	1847	40.39686	12.45764	74613	18.00000	84.00000
age2	1847	1787	1103	3300617	324.00000	7056
rrincom	1847	29550	22946	54578250	500.00000	110000

Simple Statistics

Variable	Label
AGE	Age of respondent
age2	
rrincom	

Pearson Correlation Coefficients, N = 1847  
 Prob > |r| under H0: Rho=0

	AGE	age2	rrincom
AGE	1.00000	0.98411	0.23006
Age of respondent		<.0001	<.0001
age2	0.98411	1.00000	0.18069
	<.0001	<.0001	<.0001
rrincom	0.23006	0.18069	1.00000
	<.0001	<.0001	

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The REG Procedure

Number of Observations Read	2832
Number of Observations Used	1847
Number of Observations with Missing Values	985

Descriptive Statistics

Variable	Sum	Mean	Uncorrected SS	Variance	Standard Deviation	Label
Intercept	1847.00000	1.00000	1847.00000	0	0	Intercept
AGE	74613	40.39686	3300617	155.19290	12.45764	Age of respondent
age2	3300617	1787.01516	8145283361	1217243	1103.28740	
rrincom	54578250	29550	2.584702E12	526507519	22946	

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The REG Procedure

Model: MODEL1  
 Dependent Variable: rrincom

Number of Observations Read	2832
Number of Observations Used	1847
Number of Observations with Missing Values	985

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
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Model	2	1.158526E11	57926300227	124.77	<.0001
Error	1844	8.560803E11	464251778		
Corrected Total	1846	9.719329E11			

Root MSE	21547	R-Square	0.1192
Dependent Mean	29550	Adj R-Sq	0.1182
Coeff Var	72.91621		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Standardized Estimate
Intercept	Intercept	1	-39847	4753.40164	-8.38	<.0001	0
AGE	Age of respondent	1	3051.71859	226.71187	13.46	<.0001	1.65683
age2		1	-30.15259	2.55989	-11.78	<.0001	-1.44981

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----- Respondents sex=1 -----

The REG Procedure

Number of Observations Read	1232
Number of Observations Used	879
Number of Observations with Missing Values	353

Descriptive Statistics

Variable	Sum	Mean	Uncorrected SS	Variance	Standard Deviation	Label
Intercept	879.00000	1.00000	879.00000	0	0	Intercept
AGE	35773	40.69738	1590799	153.68053	12.39680	Age of respondent
age2	1590799	1809.78271	3948922267	1218590	1103.89750	
rrincom	31279250	35585	1.667797E12	631803623	25136	

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----- Respondents sex=1 -----

The REG Procedure

Model: MODEL1  
Dependent Variable: rrincom

Number of Observations Read	1232
Number of Observations Used	879
Number of Observations with Missing Values	353

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	76402660737	38201330369	69.96	<.0001
Error	876	4.783209E11	546028448		
Corrected Total	878	5.547236E11			

Root MSE	23367	R-Square	0.1377
Dependent Mean	35585	Adj R-Sq	0.1358
Coeff Var	65.66594		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Standardized Estimate
Intercept	Intercept	1	-48622	7654.63844	-6.35	<.0001	0
AGE	Age of respondent	1	3694.41277	362.68292	10.19	<.0001	1.82206
age2		1	-36.54920	4.07294	-8.97	<.0001	-1.60515

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----- Respondents sex=2 -----

The REG Procedure  
Model: MODEL1  
Dependent Variable: rrincom

Number of Observations Read 1600  
Number of Observations Used 968  
Number of Observations with Missing Values 632

Descriptive Statistics

Variable	Sum	Mean	Uncorrected SS	Variance	Standard Deviation	Label
Intercept	968.00000	1.00000	968.00000	0	0	Intercept
AGE	38840	40.12397	1709818	156.56993	12.51279	Age of respondent
age2	1709818	1766.34091	4196361094	1216380	1102.89626	
rrincom	23299000	24069	9.169055E11	368269765	19190	

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----- Respondents sex=2 -----

The REG Procedure  
Model: MODEL1  
Dependent Variable: rrincom

Number of Observations Read 1600  
Number of Observations Used 968  
Number of Observations with Missing Values 632

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	39836426442	19918213221	60.77	<.0001
Error	965	3.162804E11	327751747		
Corrected Total	967	3.561169E11			

Root MSE 18104 R-Square 0.1119  
Dependent Mean 24069 Adj R-Sq 0.1100  
Coeff Var 75.21606

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Standardized Estimate
Intercept	Intercept	1	-30911	5406.75761	-5.72	<.0001	0
AGE	Age of respondent	1	2427.72601	259.38709	9.36	<.0001	1.58296
age2		1	-24.02131	2.94285	-8.16	<.0001	-1.38054