SPSS Textbook Examples
Regression Analysis by Example, Third Edition
Chapter 11: Variable Selection Procedures

Table 11.1, page 295. Correlation Matrix for the Supervision Performance Data in Table 3.3.

```
get file 'd:\p054.sav'.
correlation variables = x1 x2 x3 x4 x5 x6.
```

Correlations

		X1	X2	X3	X4	X5	X6
X1	Pearson Correlation	1	.558	.597	.669	.188	.225
	Sig. (2-tailed)	.	.001	.001	.000	.321	.233
	N	30	30	30	30	30	30
X2	Pearson Correlation	.558	1	.493	.445	.147	.343
	Sig. (2-tailed)	.001	.	.006	.014	.438	.063
	N	30	30	30	30	30	30
X3	Pearson Correlation	.597	.493	1	.640	.116	.532
	Sig. (2-tailed)	.001	.006	.	.000	.542	.003
	N	30	30	30	30	30	30
X4	Pearson Correlation	.669	.445	.640	1	.377	.574
	Sig. (2-tailed)	.000	.014	.000	.	.040	.001
	N	30	30	30	30	30	30
X5	Pearson Correlation	.188	.147	.116	.377	1	.283
	Sig. (2-tailed)	.321	.438	.542	.040	.	.129
	N	30	30	30	30	30	30
X6	Pearson Correlation	.225	.343	.532	.574	.283	1
	Sig. (2-tailed)	.233	.063	.003	.001	.129	.
	N	30	30	30	30	30	30

VIF, middle of page 295.

```
regression
 /statistics tol
 /dependent = y
 /method enter = x1 x2 x3 x4 x5 x6.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	X6, X1, X5, X2, X3, X4[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: Y

Coefficients^a

Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	.375	2.667
	X2	.625	1.601
	X3	.440	2.271
	X4	.325	3.078
	X5	.814	1.228
	X6	.512	1.952

a. Dependent Variable: Y

Eigenvalues, bottom of page 295.

```
factor variables = x1 x2 x3 x4 x5 x6
 /criteria factors (6)
 /rotation norotate
 /method = correlation.
```

Communalities

	Initial	Extraction
X1	1.000	1.000
X2	1.000	1.000
X3	1.000	1.000
X4	1.000	1.000
X5	1.000	1.000
X6	1.000	1.000

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.169	52.820	52.820	3.169	52.820	52.820
2	1.006	16.772	69.593	1.006	16.772	69.593
3	.763	12.715	82.308	.763	12.715	82.308
4	.553	9.209	91.517	.553	9.209	91.517
5	.317	5.287	96.804	.317	5.287	96.804
6	.192	3.196	100.000	.192	3.196	100.000

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component					
	1	2	3	4	5	6
X1	.782	-.314	.389	-.235	-.108	.268
X2	.703	-.310	.190	.606	-.021	-.083
X3	.821	-.218	-.238	-.167	.437	-.052
X4	.877	.116	.005	-.271	-.259	-.276
X5	.400	.805	.399	.074	.163	.025
X6	.678	.322	-.600	.153	-.143	.182

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Table 11.2, page 296. Variables selected by the Forward Selection Method.

NOTE: The probability (p-value) for entering was set at .99 so that all the variables will be entered into the model. The reason is that we are mainly interested in the order in which they entered the model.

```
regression
 /statistics = selection coef outs r anova
 /criteria = pin(.99) pout(.1)
 /dependent = y
 /method = forward x1 x2 x3 x4 x5 x6.
```

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	x1 X1	.	Forward (Criterion: Probability-of-F-to-enter <= .990)
2	x3 X3	.	Forward (Criterion: Probability-of-F-to-enter <= .990)
3	x6 X6	.	Forward (Criterion: Probability-of-F-to-enter <= .990)
4	x2 X2	.	Forward (Criterion: Probability-of-F-to-enter <= .990)
5	x4 X4	.	Forward (Criterion: Probability-of-F-to-enter <= .990)
6	x5 X5	.	Forward (Criterion: Probability-of-F-to-enter <= .990)

a. Dependent Variable: y Y

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Selection Criteria			
					Akaike Information Criterion	Amemiya Prediction Criterion	Mallows' Prediction Criterion	Schwarz Bayesian Criterion
1	.825[a]	.681	.670	6.993	118.628	.364	1.411	121.430
2	.841[b]	.708	.686	6.817	118.002	.357	1.115	122.206
3	.852[c]	.726	.694	6.734	118.140	.359	1.603	123.744
4	.854[d]	.729	.686	6.821	119.727	.379	3.280	126.733
5	.855[e]	.732	.676	6.929	121.452	.402	5.068	129.859
6	.856[f]	.733	.663	7.068	123.364	.430	7.000	133.172

a. Predictors: (Constant), X1

b. Predictors: (Constant), X1, X3

c. Predictors: (Constant), X1, X3, X6

d. Predictors: (Constant), X1, X3, X6, X2

e. Predictors: (Constant), X1, X3, X6, X2, X4

f. Predictors: (Constant), X1, X3, X6, X2, X4, X5

ANOVA[g]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2927.584	1	2927.584	59.861	.000[a]
	Residual	1369.382	28	48.907		
	Total	4296.967	29			
2	Regression	3042.318	2	1521.159	32.735	.000[b]
	Residual	1254.649	27	46.468		
	Total	4296.967	29			
3	Regression	3117.858	3	1039.286	22.917	.000[c]
	Residual	1179.109	26	45.350		
	Total	4296.967	29			
4	Regression	3133.955	4	783.489	16.842	.000[d]
	Residual	1163.012	25	46.520		
	Total	4296.967	29			
5	Regression	3144.560	5	628.912	13.098	.000[e]
	Residual	1152.406	24	48.017		
	Total	4296.967	29			
6	Regression	3147.966	6	524.661	10.502	.000[f]
	Residual	1149.000	23	49.957		
	Total	4296.967	29			

a. Predictors: (Constant), X1

b. Predictors: (Constant), X1, X3

c. Predictors: (Constant), X1, X3, X6

d. Predictors: (Constant), X1, X3, X6, X2

e. Predictors: (Constant), X1, X3, X6, X2, X4

f. Predictors: (Constant), X1, X3, X6, X2, X4, X5

g. Dependent Variable: Y

Coefficients^a

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	14.376	6.620		2.172	.039
	X1	.755	.098	.825	7.737	.000
2	(Constant)	9.871	7.061		1.398	.174
	X1	.644	.118	.704	5.432	.000
	X3	.211	.134	.204	1.571	.128
3	(Constant)	13.578	7.544		1.800	.084
	X1	.623	.118	.681	5.271	.000
	X3	.312	.154	.301	2.026	.053
	X6	-.187	.145	-.158	-1.291	.208
4	(Constant)	14.303	7.740		1.848	.076
	X1	.653	.131	.715	5.006	.000
	X3	.324	.157	.312	2.058	.050
	X6	-.172	.149	-.145	-1.151	.261
	X2	-.077	.131	-.077	-.588	.562
5	(Constant)	12.798	8.491		1.507	.145
	X1	.613	.158	.671	3.885	.001
	X3	.312	.162	.301	1.924	.066
	X6	-.211	.173	-.178	-1.218	.235
	X2	-.072	.133	-.073	-.543	.592
	X4	.098	.208	.084	.470	.643
6	(Constant)	10.787	11.589		.931	.362
	X1	.613	.161	.671	3.809	.001
	X3	.320	.169	.309	1.901	.070
	X6	-.217	.178	-.183	-1.218	.236
	X2	-.073	.136	-.073	-.538	.596
	X4	.082	.221	.070	.369	.715
	X5	.038	.147	.031	.261	.796

a. Dependent Variable: Y

Excluded Variables[f]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	X2	-.050[a]	-.386	.702	-.074	.688
	X3	.204[a]	1.571	.128	.289	.644
	X4	.068[a]	.470	.642	.090	.552
	X5	.002[a]	.014	.989	.003	.965
	X6	-.032[a]	-.287	.777	-.055	.950
2	X2	-.104[b]	-.799	.432	-.155	.648
	X4	-.024[b]	-.157	.876	-.031	.462
	X5	.001[b]	.007	.995	.001	.965
	X6	-.158[b]	-1.291	.208	-.245	.704
3	X2	-.077[c]	-.588	.562	-.117	.628
	X4	.091[c]	.518	.609	.103	.354
	X5	.043[c]	.391	.699	.078	.884
4	X4	.084[d]	.470	.643	.095	.353
	X5	.044[d]	.387	.702	.079	.884
5	X5	.031[e]	.261	.796	.054	.814

a. Predictors in the Model: (Constant), X1

b. Predictors in the Model: (Constant), X1, X3

c. Predictors in the Model: (Constant), X1, X3, X6

d. Predictors in the Model: (Constant), X1, X3, X6, X2

e. Predictors in the Model: (Constant), X1, X3, X6, X2, X4

f. Dependent Variable: Y

Regression Equation, page 296.
NOTE: The probability to remove, pout(.33) corresponds to a t-value of 1.0.

```
regression
 /statistics = coef
 /criteria = pin(.1) pout(.33)
 /dependent = y
 /method = backward x1 x2 x3 x4 x5 x6.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	x6 X6, x1 X1, x5 X5, x2 X2, x3 X3, x4 X4[a]	.	Enter
2		x5 X5	Backward (criterion: Probability of F-to-remove >= .330).
3		x4 X4	Backward (criterion: Probability of F-to-remove >= .330).
4		x2 X2	Backward (criterion: Probability of F-to-remove >= .330).

a. All requested variables entered.

b. Dependent Variable: y Y

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.787	11.589		.931	.362
	X1	.613	.161	.671	3.809	.001
	X2	-.073	.136	-.073	-.538	.596
	X3	.320	.169	.309	1.901	.070
	X4	.082	.221	.070	.369	.715
	X5	.038	.147	.031	.261	.796
	X6	-.217	.178	-.183	-1.218	.236
2	(Constant)	12.798	8.491		1.507	.145
	X1	.613	.158	.671	3.885	.001
	X2	-.072	.133	-.073	-.543	.592
	X3	.312	.162	.301	1.924	.066
	X4	.098	.208	.084	.470	.643
	X6	-.211	.173	-.178	-1.218	.235
3	(Constant)	14.303	7.740		1.848	.076
	X1	.653	.131	.715	5.006	.000
	X2	-.077	.131	-.077	-.588	.562
	X3	.324	.157	.312	2.058	.050
	X6	-.172	.149	-.145	-1.151	.261
4	(Constant)	13.578	7.544		1.800	.084
	X1	.623	.118	.681	5.271	.000
	X3	.312	.154	.301	2.026	.053
	X6	-.187	.145	-.158	-1.291	.208

a. Dependent Variable: Y

Table 11.3, page 297. Variables selected by the Backward Elimination Method.
NOTE: The probability (p-value) for removal was set at .01 so that all the variables will be entered into the model.

```
regression
 /statistics = selection coef outs r anova
 /criteria = pin(.1) pout(.01)
 /dependent = y
 /method = backward x1 x2 x3 x4 x5 x6.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	x6 X6, x1 X1, x5 X5, x2 X2, x3 X3, x4 X4[a]	.	Enter
2	.	x5 X5	Backward (criterion: Probability of F-to-remove >= .110).
3	.	x4 X4	Backward (criterion: Probability of F-to-remove >= .110).
4	.	x2 X2	Backward (criterion: Probability of F-to-remove >= .110).
5	.	x6 X6	Backward (criterion: Probability of F-to-remove >= .110).
6	.	x3 X3	Backward (criterion: Probability of F-to-remove >= .110).

a. All requested variables entered.

b. Dependent Variable: y Y

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Akaike Information Criterion	Amemiya Prediction Criterion	Mallows' Prediction Criterion	Schwarz Bayesian Criterion
					Selection Criteria			
1	.856[a]	.733	.663	7.068	123.364	.430	7.000	133.172
2	.855[b]	.732	.676	6.929	121.452	.402	5.068	129.859
3	.854[c]	.729	.686	6.821	119.727	.379	3.280	126.733
4	.852[d]	.726	.694	6.734	118.140	.359	1.603	123.744
5	.841[e]	.708	.686	6.817	118.002	.357	1.115	122.206
6	.825[f]	.681	.670	6.993	118.628	.364	1.411	121.430

a. Predictors: (Constant), X6, X1, X5, X2, X3, X4

b. Predictors: (Constant), X6, X1, X2, X3, X4

c. Predictors: (Constant), X6, X1, X2, X3

d. Predictors: (Constant), X6, X1, X3

e. Predictors: (Constant), X1, X3

f. Predictors: (Constant), X1

ANOVA[g]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3147.966	6	524.661	10.502	.000[a]
	Residual	1149.000	23	49.957		
	Total	4296.967	29			
2	Regression	3144.560	5	628.912	13.098	.000[b]
	Residual	1152.406	24	48.017		
	Total	4296.967	29			
3	Regression	3133.955	4	783.489	16.842	.000[c]
	Residual	1163.012	25	46.520		
	Total	4296.967	29			
4	Regression	3117.858	3	1039.286	22.917	.000[d]
	Residual	1179.109	26	45.350		
	Total	4296.967	29			
5	Regression	3042.318	2	1521.159	32.735	.000[e]
	Residual	1254.649	27	46.468		
	Total	4296.967	29			
6	Regression	2927.584	1	2927.584	59.861	.000[f]
	Residual	1369.382	28	48.907		
	Total	4296.967	29			

a. Predictors: (Constant), X6, X1, X5, X2, X3, X4

b. Predictors: (Constant), X6, X1, X2, X3, X4

c. Predictors: (Constant), X6, X1, X2, X3

d. Predictors: (Constant), X6, X1, X3

e. Predictors: (Constant), X1, X3

f. Predictors: (Constant), X1

g. Dependent Variable: Y

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	10.787	11.589		.931	.362
	X1	.613	.161	.671	3.809	.001
	X2	-.073	.136	-.073	-.538	.596
	X3	.320	.169	.309	1.901	.070
	X4	.082	.221	.070	.369	.715
	X5	.038	.147	.031	.261	.796
	X6	-.217	.178	-.183	-1.218	.236
2	(Constant)	12.798	8.491		1.507	.145
	X1	.613	.158	.671	3.885	.001
	X2	-.072	.133	-.073	-.543	.592
	X3	.312	.162	.301	1.924	.066
	X4	.098	.208	.084	.470	.643
	X6	-.211	.173	-.178	-1.218	.235
3	(Constant)	14.303	7.740		1.848	.076
	X1	.653	.131	.715	5.006	.000
	X2	-.077	.131	-.077	-.588	.562
	X3	.324	.157	.312	2.058	.050
	X6	-.172	.149	-.145	-1.151	.261
4	(Constant)	13.578	7.544		1.800	.084
	X1	.623	.118	.681	5.271	.000
	X3	.312	.154	.301	2.026	.053
	X6	-.187	.145	-.158	-1.291	.208
5	(Constant)	9.871	7.061		1.398	.174
	X1	.644	.118	.704	5.432	.000
	X3	.211	.134	.204	1.571	.128
6	(Constant)	14.376	6.620		2.172	.039
	X1	.755	.098	.825	7.737	.000

a. Dependent Variable: Y

Excluded Variables[f]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
2	X5	.031[a]	.261	.796	.054	.814
3	X5	.044[b]	.387	.702	.079	.884
	X4	.084[b]	.470	.643	.095	.353
4	X5	.043[c]	.391	.699	.078	.884
	X4	.091[c]	.518	.609	.103	.354
	X2	-.077[c]	-.588	.562	-.117	.628
5	X5	.001[d]	.007	.995	.001	.965
	X4	-.024[d]	-.157	.876	-.031	.462
	X2	-.104[d]	-.799	.432	-.155	.648
	X6	-.158[d]	-1.291	.208	-.245	.704
6	X5	.002[e]	.014	.989	.003	.965
	X4	.068[e]	.470	.642	.090	.552
	X2	-.050[e]	-.386	.702	-.074	.688
	X6	-.032[e]	-.287	.777	-.055	.950
	X3	.204[e]	1.571	.128	.289	.644

a. Predictors in the Model: (Constant), X6, X1, X2, X3, X4

b. Predictors in the Model: (Constant), X6, X1, X2, X3

c. Predictors in the Model: (Constant), X6, X1, X3

d. Predictors in the Model: (Constant), X1, X3

e. Predictors in the Model: (Constant), X1

f. Dependent Variable: Y

Table 11.4-11.5 page 297and Figure 11.1 page 298.
NOTE: SPSS does not have the best subset option.

Table 11.7, page 301. First Part of the Homicide Data.

```
get file 'd:\p301.sav'.
list variables year to clear.
```

```
     year        ftp    unemp         m        lic         gr      clear

     1961     260.35    11.00    455.50     178.15     215.98      93.40
     1962     269.80     7.00    480.20     156.41     180.48      88.50
     1963     272.04     5.20    506.10     198.02     209.57      94.40
     1964     272.96     4.30    535.80     222.10     231.67      92.00
     1965     272.51     3.50    576.00     301.92     297.65      91.00
     1966     261.34     3.20    601.70     391.22     367.62      87.40
     1967     268.89     4.10    577.30     665.56     616.54      88.30
     1968     295.99     3.90    596.90    1131.21    1029.75      86.10
     1969     319.87     3.60    613.50     837.80     786.23      79.00
     1970     341.43     7.10    569.30     794.90     713.77      73.90
     1971     356.59     8.40    548.80     817.74     750.43      63.40
     1972     376.69     7.70    563.40     583.17    1027.38      62.50
     1973     390.19     6.30    609.30     709.59     666.50      58.90

Number of cases read:   13    Number of cases listed:   13
```

Table 11.8, page 301. Second Part of the Homicide Data.

```
list variables year w to h.
```

```
     year          w      nman          g         he         we          h

     1961     558724    538.10     133.90       2.98     117.18       8.60
     1962     538584    547.60     137.60       3.09     134.02       8.90
```

```
1963      519171      562.80      143.60      3.23      141.68      8.52
1964      500457      591.00      150.30      3.33      147.98      8.89
1965      482418      626.10      164.30      3.46      159.85     13.07
1966      465029      659.80      179.50      3.60      157.19     14.57
1967      448267      686.20      187.50      3.73      155.29     21.36
1968      432109      699.60      195.40      2.91      131.75     28.03
1969      416533      729.90      210.30      4.25      178.74     31.49
1970      401518      757.80      223.80      4.47      178.30     37.39
1971      398046      755.30      227.70      5.04      209.54     46.26
1972      373095      787.00      230.90      5.47      240.05     47.24
1973      359647      819.80      230.20      5.76      258.05     52.33
```

Number of cases read: 13   Number of cases listed: 13

Table 11.9, page 301. The OLS Results From Fitting Model (11.8).

```
regression
 /statistics tol coef r
 /dependent = h
 /method enter = g m w.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	W, M, G[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987[a]	.975	.966	3.01636

a. Predictors: (Constant), W, M, G

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	199.306	81.576		2.443	.037		
	G	.104	.153	.235	.682	.513	.024	42.234
	M	-.133	.030	-.405	-4.472	.002	.345	2.900
	W	.000	.000	-1.025	-2.711	.024	.020	50.569

a. Dependent Variable: H

Table 11.10, page 302.

Model A.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = g.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	G[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958[a]	.918	.910	4.90464

a. Predictors: (Constant), G

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-53.613	7.231		-7.415	.000
	G	.424	.038	.958	11.087	.000

a. Dependent Variable: H

Model B.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = m.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	M[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.546[a]	.299	.235	14.33316

a. Predictors: (Constant), M

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-74.870	46.382		-1.614	.135
	M	.180	.083	.546	2.164	.053

a. Dependent Variable: H

Model C.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = w.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	W[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947[a]	.897	.887	5.50157

a. Predictors: (Constant), W

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	135.544	11.405		11.885	.000
	W	.000	.000	-.947	-9.770	.000

a. Dependent Variable: H

Model D.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = g m.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	M, G[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977[a]	.954	.945	3.85699

a. Predictors: (Constant), M, G

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-20.054	13.303		-1.508	.163
	G	.508	.043	1.149	11.912	.000
	M	-.089	.032	-.269	-2.791	.019

a. Dependent Variable: H

Model E.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = g w.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	W, G[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.958[a]	.918	.902	5.13661

a. Predictors: (Constant), W, G

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-35.589	106.288		-.335	.745
	G	.384	.237	.868	1.618	.137
	W	.000	.000	-.091	-.170	.868

a. Dependent Variable: H

Model F.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = g m w.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	W, M, G[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987[a]	.975	.966	3.01636

a. Predictors: (Constant), W, M, G

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	199.306	81.576		2.443	.037
	G	.104	.153	.235	.682	.513
	M	-.133	.030	-.405	-4.472	.002
	W	.000	.000	-1.025	-2.711	.024

a. Dependent Variable: H

Model G.

```
regression
 /statistics coef r
 /dependent = h
 /method enter = m w.
```

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	W, M, G[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: H

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987[a]	.973	.968	2.93451

a. Predictors: (Constant), W, M

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	252.591	22.693		11.131	.000
	M	-.141	.026	-.430	-5.354	.000
	W	.000	.000	-1.276	-15.888	.000

a. Dependent Variable: H