# Gasoline mileage data

## The GLMSELECT Procedure

| | |
|---|---|
| **Data Set** | WORK.MILEAGE |
| **Dependent Variable** | y |
| **Selection Method** | LASSO |
| **Stop Criterion** | SBC |
| **Effect Hierarchy Enforced** | None |

| | |
|---|---|
| **Number of Observations Read** | 32 |
| **Number of Observations Used** | 30 |

| Dimensions | |
|---|---|
| **Number of Effects** | 12 |
| **Number of Parameters** | 12 |

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## The GLMSELECT Procedure

| | | | LASSO Selection Summary | |
|---|---|---|---|---|
| **Step** | **Effect Entered** | **Effect Removed** | **Number Effects In** | **SBC** |
| **0** | Intercept | | 1 | 112.5052 |
| **1** | x1 | | 2 | 92.8706 |
| **2** | x10 | | 3 | 83.2393 |
| **3** | x9 | | 4 | 82.4384* |
| | | **\* Optimal Value of Criterion** | | |

Selection stopped at a local minimum of the SBC criterion.

| | | Stop Details | | |
|---|---|---|---|---|
| **Candidate For** | **Effect** | **Candidate SBC** | | **Compare SBC** |
| **Entry** | x5 | 85.5101 | > | 82.4384 |

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## The GLMSELECT Procedure



Coefficient Progression for y
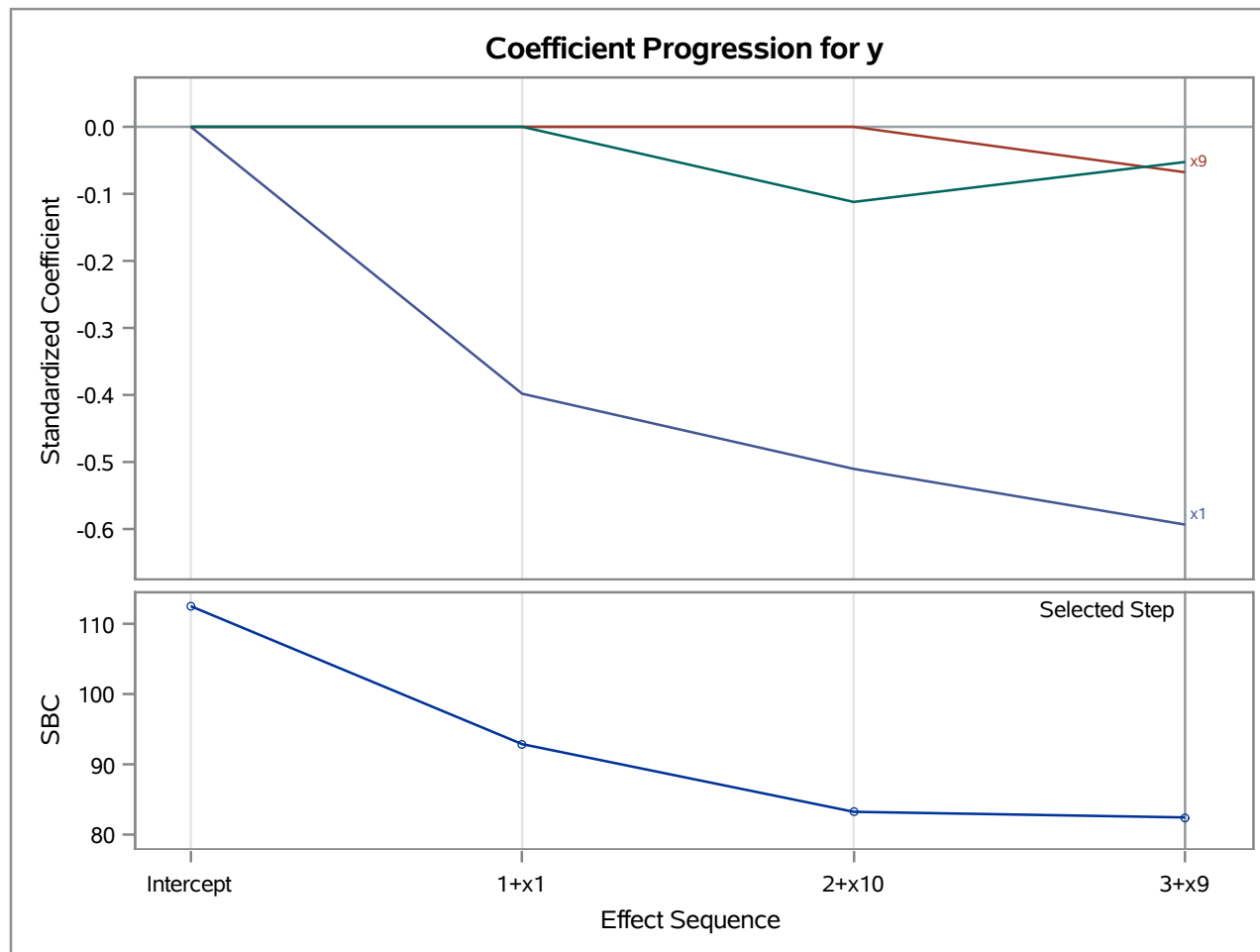
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## The GLMSELECT Procedure
## Selected Model

**The selected model is the model at the last step (Step 3).**

| Effects: | Intercept x1 x9 x10 |
|---|---|

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## The GLMSELECT Procedure
## Selected Model

| Analysis of Variance | | | | |
|---|---|---|---|---|
| Source | DF | Sum of Squares | Mean Square | F Value |
| Model | 3 | 841.53451 | 280.51150 | 24.51 |
| Error | 26 | 297.57051 | 11.44502 | |
| Corrected Total | 29 | 1139.10502 | | |

| | |
|---|---|
| Root MSE | 3.38305 |
| Dependent Mean | 20.03833 |
| R-Square | 0.7388 |
| Adj R-Sq | 0.7086 |
| AIC | 108.83361 |
| AICC | 111.33361 |
| SBC | 82.43840 |

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## The GLMSELECT Procedure
## Selected Model

| Parameter Estimates | | |
|---|---|---|
| **Parameter** | **DF** | **Estimate** |
| **Intercept** | 1 | 35.803463 |
| **x1** | 1 | -0.031995 |
| **x9** | 1 | -0.074846 |
| **x10** | 1 | -0.000350 |