

## The SAS System

### The LOGISTIC Procedure

Model Information	
Data Set	WORK.FORD
Response Variable (Events)	y
Response Variable (Trials)	total
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	8
Number of Observations Used	8
Sum of Frequencies Read	2480
Sum of Frequencies Used	2480

Response Profile		
Ordered Value	Binary Outcome	Total Frequency
1	Event	2438
2	Nonevent	42

Class Level Information				
Class	Value	Design Variables		
speed	four	1	0	0
	one	0	1	0
	three	0	0	1
	two	0	0	0
make	ford	1		
	other	0		

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

Deviance and Pearson Goodness-of-Fit Statistics				
Criterion	Value	DF	Value/DF	Pr > ChiSq
Deviance	7.1847	3	2.3949	0.0662
Pearson	6.7954	3	2.2651	0.0787

Number of unique profiles: 8

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
		Log Likelihood	Full Log Likelihood
AIC	427.866	355.463	40.598
SC	433.682	384.543	69.678
-2 Log L	425.866	345.463	30.598

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	80.4030	4	<.0001
Score	107.6249	4	<.0001
Wald	67.3682	4	<.0001

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
make	1	17.3293	<.0001
speed	3	48.2755	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	6.0455	0.5325	128.9126	<.0001
make	ford	1	-1.3512	0.3246	17.3293	<.0001
speed	four	1	-2.8628	0.5385	28.2644	<.0001
speed	one	1	-0.1192	0.7664	0.0242	0.8764
speed	three	1	-1.2821	0.6495	3.8973	0.0484

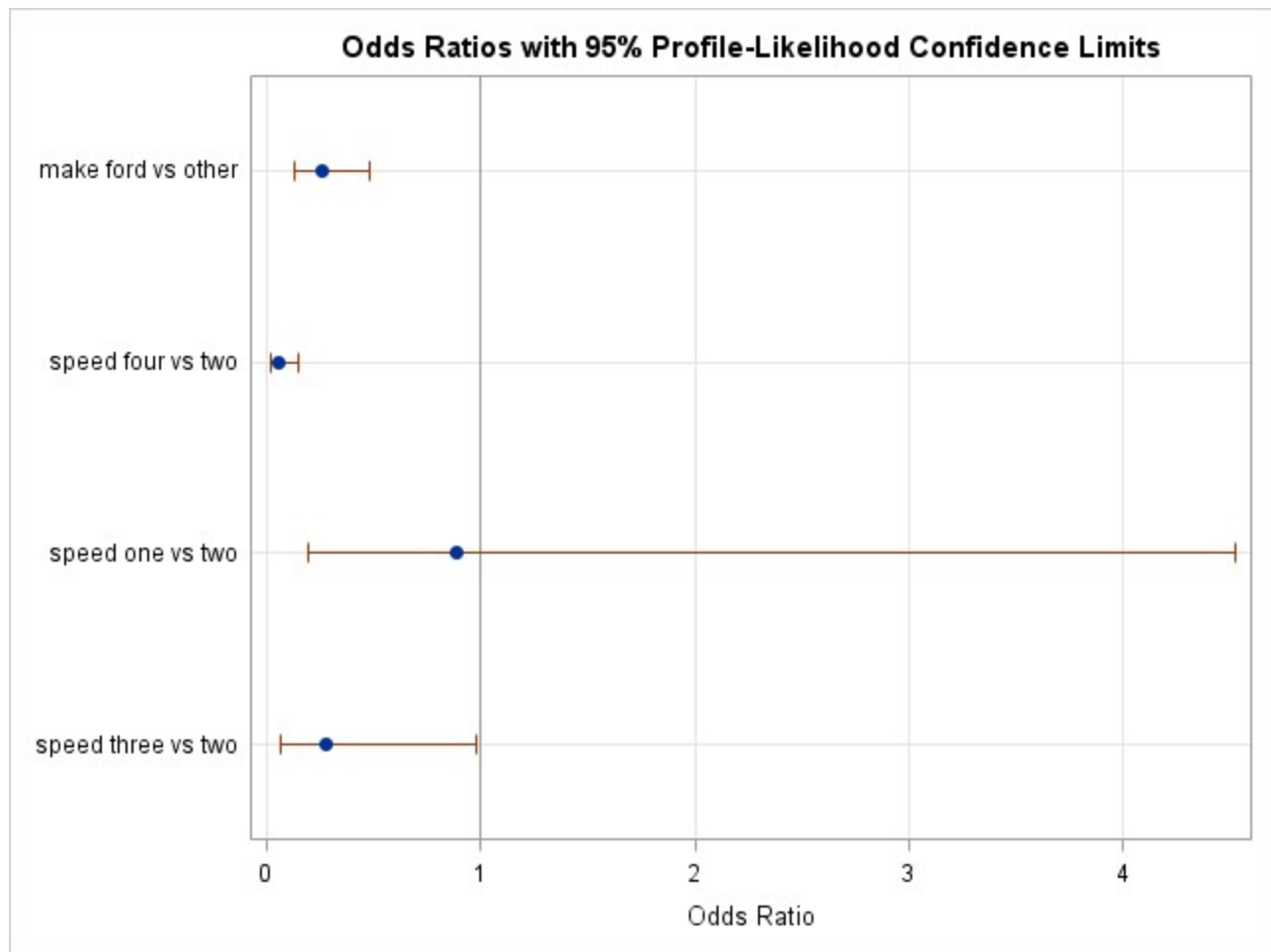
Association of Predicted Probabilities and Observed Responses			
Percent Concordant	74.6	Somers' D	0.631
Percent Discordant	11.6	Gamma	0.732
Percent Tied	13.8	Tau-a	0.021
Pairs	102396	c	0.815

Parameter Estimates and Profile-Likelihood

Confidence Intervals				
Parameter		Estimate	95% Confidence Limits	
Intercept		6.0455	5.1291	7.2651
make	ford	-1.3512	-2.0033	-0.7218
speed	four	-2.8628	-4.0857	-1.9179
speed	one	-0.1192	-1.6361	1.5093
speed	three	-1.2821	-2.6525	-0.0217

Parameter Estimates and Wald Confidence Intervals				
Parameter		Estimate	95% Confidence Limits	
Intercept		6.0455	5.0019	7.0891
make	ford	-1.3512	-1.9874	-0.7150
speed	four	-2.8628	-3.9182	-1.8074
speed	one	-0.1192	-1.6213	1.3828
speed	three	-1.2821	-2.5550	-0.00922

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
make ford vs other	1.0000	0.259	0.135	0.486
speed four vs two	1.0000	0.057	0.017	0.147
speed one vs two	1.0000	0.888	0.195	4.524
speed three vs two	1.0000	0.277	0.070	0.979



Odds Ratio Estimates and Wald Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
make ford vs other	1.0000	0.259	0.137	0.489
speed four vs two	1.0000	0.057	0.020	0.164
speed one vs two	1.0000	0.888	0.198	3.986
speed three vs two	1.0000	0.277	0.078	0.991

