```
data aids;
input race $ AZTuse $ yes no;
total = yes + no;
datalines;
w  yes 14 93
w  no  32 81
b  yes 11 52
b  no  12 43
;
proc logistic;
class race(ref='b') AZTuse(ref='no')/param=ref;
model yes/total=race  AZTuse;
run;

proc genmod;
class race(ref='b') AZTuse(ref='no')/param=ref;
model yes/total=race  AZTuse/dist=bin link=logit;
run;
```

The SAS System

The LOGISTIC Procedure

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

Number of Observations Read	4
Number of Observations Used	4
Sum of Frequencies Read	338
Sum of Frequencies Used	338

Response Profile		
Ordered Value	Binary Outcome	Total Frequency
1	Event	69
2	Nonevent	269

Class Level Information		
Class	Value	Design Variables
race	b	0
	w	1
AZTuse	no	0
	yes	1

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

Model Fit Statistics			
		Intercept and Covariates	
Criterion	Intercept Only	Log Likelihood	Full Log Likelihood
AIC	344.118	341.151	24.860
SC	347.941	352.620	36.329
-2 Log L	342.118	335.151	18.860

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	6.9664	2	0.0307
Score	6.8957	2	0.0318
Wald	6.7402	2	0.0344

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
race	1	0.0370	0.8476
AZTuse	1	6.6507	0.0099

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-1.0736	0.2629	16.6705	<.0001
race	w	1	0.0555	0.2886	0.0370	0.8476
AZTuse	yes	1	-0.7195	0.2790	6.6507	0.0099

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
race w vs b	1.057	0.600	1.861
AZTuse yes vs no	0.487	0.282	0.841

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	45.7	Somers' D	0.183
Percent Discordant	27.5	Gamma	0.250
Percent Tied	26.8	Tau-a	0.060
Pairs	18561	c	0.591

The SAS System

The GENMOD Procedure

Model Information	
Data Set	WORK.AIDS
Distribution	Binomial
Link Function	Logit
Response Variable (Events)	yes
Response Variable (Trials)	total

Number of Observations Read	4
Number of Observations Used	4
Number of Events	69
Number of Trials	338

Class Level Information		
Class	Value	Design Variables
race	b	0
	w	1
AZTuse	no	0
	yes	1

Response Profile		
Ordered Value	Binary Outcome	Total Frequency
1	Event	69
2	Nonevent	269

Criteria For Assessing Goodness Of Fit			
Criterion	DF	Value	Value/DF
Deviance	1	1.3835	1.3835
Scaled Deviance	1	1.3835	1.3835
Pearson Chi-Square	1	1.3910	1.3910
Scaled Pearson X2	1	1.3910	1.3910
Log Likelihood		-167.5756	
Full Log Likelihood		-9.4299	

AIC (smaller is better)		24.8598	
AICC (smaller is better)		.	
BIC (smaller is better)		23.0187	

Algorithm converged.

Analysis Of Maximum Likelihood Parameter Estimates

Parameter		DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept		1	-1.0736	0.2629	-1.5889	-0.5582	16.67	<.0001
race	w	1	0.0555	0.2886	-0.5102	0.6212	0.04	0.8476
AZTuse	yes	1	-0.7195	0.2790	-1.2662	-0.1727	6.65	0.0099
Scale		0	1.0000	0.0000	1.0000	1.0000		

Note: The scale parameter was held fixed.