

Power Calculations in SAS

The SAS procedures POWER and GLMPOWER are available to provide a wide variety of power calculations. The full range of options they provide lie well beyond the scope of this somewhat brief introduction to power calculations; but as an example, we shall illustrate the use of PROC GLMPOWER for the power calculations of the example in Section 3.7.

The SAS code is as follows:

```
data ex1;
input gp y W;
datalines;
1 0 4
2 0 2
3 8 2
4 8 3
5 8 4
;
run;
;
proc glmpower data=ex1;
class gp;
model y=gp;
weight W;
power
stdev=3.4
ntotal=15
power=.;
run;
```

Note the use of the weight variable W to avoid having to repeat lines of input.

This procedure results in the following output

The GLMPOWER Procedure

Fixed Scenario Elements

Dependent Variable	y
Source	gp
Weight Variable	W
Error Standard Deviation	3.4
Total Sample Size	15
Alpha	0.05
Test Degrees of Freedom	4
Error Degrees of Freedom	10

Computed Power

Power

0.820

If the y variable 8 is replaced by 10 in the above example, then the final power is given as 0.957, exactly the same as the Pearson-Hartley calculations given previously.