```
LIBNAME mydata '/home/u58684395/tutorial4';
PROC PRINT DATA=mydata.eyestudy (OBS=5);
RUN;

PROC FORMAT;
    VALUE Cformat 1="Carrot gene" 0="No carrot gene";
    VALUE Lformat 1="Corrective lenses" 0="No corrective lenses";
    VALUE Gformat 1="Female" 2="Male";
RUN;


DATA eyestudytimes10;
    INPUT gender lenses num;
    DATALINES;
1 0 220
1 1 300
2 0 250
2 1 230
;
RUN;


PROC FREQ DATA=eyestudytimes10 ORDER=FORMATTED;
    TITLE "Is Gender a Risk Factor For Requiring Corrective Lenses Times 10";
    FORMAT lenses Lformat. gender Gformat.;
    TABLES gender*lenses / NOPERCENT NOCOL NOROW CHISQ RELRISK;
    WEIGHT num;
RUN;

/* SAS assumes exposed and unexposed cohorts are of equal size*/
PROC POWER;
    TITLE "Sample Size For POWER=0.75";
    TWOSAMPLEFREQ TEST=pchi
    POWER = 0.75
    ALPHA = 0.05
    RELATIVERISK = 2
    NULLRELATIVERISK= 1
    REFPROPORTION = 0.20
    NPERGROUP =.;
RUN;
PROC POWER;
    TITLE "Sample Size For POWER=0.80";
    TWOSAMPLEFREQ TEST=pchi
    POWER = 0.80
    ALPHA = 0.05
    RELATIVERISK = 2
    NULLRELATIVERISK= 1
    REFPROPORTION = 0.20
    NPERGROUP =.;
RUN;
PROC POWER;
    TITLE "Sample Size For POWER=0.85";
    TWOSAMPLEFREQ TEST=pchi
    POWER = 0.85
    ALPHA = 0.05
    RELATIVERISK = 2
    NULLRELATIVERISK= 1
    REFPROPORTION = 0.20
    NPERGROUP =.;
RUN;
PROC POWER;
    TITLE "Sample Size For POWER=0.90";
    TWOSAMPLEFREQ TEST=pchi
    POWER = 0.90
```

```
    ALPHA = 0.05
    RELATIVERISK = 2
    NULLRELATIVERISK= 1
    REFPROPORTION = 0.20
    NPERGROUP =.;
RUN;
PROC POWER;
    TITLE "Sample Size For POWER=0.95";
    TWOSAMPLEFREQ TEST=pchi
    POWER = 0.95
    ALPHA = 0.05
    RELATIVERISK = 2
    NULLRELATIVERISK= 1
    REFPROPORTION = 0.20
    NPERGROUP =.;
RUN;
```