

```
/* Proof of Data Collection and Descriptive Statistics */  
/* The Effects of Visual and Auditory Cues on Human Reaction Time */  
/* Dylan Demo, Jess Joblin, and Josh Lapish */
```

```
/* Reading in the data */
```

```
data reaction;  
input participant $ rxn_type $ rxn_ms;  
cards;  
1 visual 423  
1 sound 760  
1 combined 529  
2 visual 320  
2 sound 483  
2 combined 464  
3 visual 247  
3 sound 379  
3 combined 342  
4 visual 222  
4 sound 389  
4 combined 315  
5 visual 327  
5 sound 334  
5 combined 426  
6 visual 394  
6 sound 504  
6 combined 724  
7 visual 500  
7 sound 305  
7 combined 495  
8 visual 376  
8 sound 310  
8 combined 392  
9 visual 283  
9 sound 313  
9 combined 275  
10 visual 285  
10 sound 285  
10 combined 252  
11 visual 431  
11 sound 276  
11 combined 469  
12 visual 432  
12 sound 268  
12 combined 473
```

```
;
/*Grand Mean*/
proc means data=reaction;
run;
/*Factor Means*/
proc means data=reaction;
class rxn_type;
run;
/*Block Means*/
proc means data=reaction;
class participant;
run;

/*ANOVA, CI, Contrast, Assumptions*/
proc glm PLOTS=(DIAGNOSTICS RESIDUALS) data=reaction;
class participant rxn_type;
model rxn_ms = participant rxn_type / clparm;
lsmeans participant rxn_type / adjust=bon ci pdiff;
contrast 'Visual and Sound vs. Combined' rxn_type -1 .5 .5;
estimate 'Visual and Sound vs. Combined' rxn_type -1 .5 .5;
run;
```