

Tips for the Results Section of Lab 1 Write-up

Here are some standard ways of reporting your data. Note, of course, that the numeric values will be different from the numbers given below!

The just noticeable differences from my own data were calculated to be 8.3 grams for the 100 gram standard group of weights and 15.2 grams for the 200 gram standard. The corresponding Weber fractions were $k = 8.3/100 = 0.083$ for the 100-gram standard and $k = 0.076$ for the 200-gram standard. For my personal data, therefore, the hypothesis was supported since the Weber fractions were roughly equal.

The Weber fractions (k) for the entire class were analyzed in a 2 (100 and 200 standard) by 2 (order) repeated-measures analysis of variance (ANOVA) to investigate whether the Weber k was a constant in general. The Weber k for the 100 gram standard (mean = 0.1116) and for the 200 gram standard (mean = 0.0805) were found to be significantly different, $F(1,34) = 31.2933$, $p < .0001$.

Additionally, we investigated order effects in this experiment. It was found that people who got the 100 standard first ($M=0.0886$) had marginally higher JND's than those who tested against the 200 standard ($M=0.1027$) first, $F(1,33)=4.0392$, $p=.0524$ although the effect was not significant at the 0.05 level.

Don't forget to discuss graphs and any other numbers that have been pointed out in the lab instructions.