

A Memo to Indicate My Contributions to This Section of the Project

In a group setting, we discussed our plans for the report – we went over derivations and discussed the type of distribution from which the data might come. So, we did the derivations on paper and checked our work in the group. As a group we created our custom estimators ($2 \times \text{median}$ and $2 \times \text{max} - \text{median}$). To solve the German Tank problem, we originally planned to use the ML estimator and then switched to the composite minMax in order that we would not always fall short of the actual value (we opted for higher accuracy rather than higher precision). Additionally, the R Markdown part of our report was done by other members of my group. It was primarily done by my partner Siang, who created the histograms and tables and engaged in the trouble-shooting of indenting errors.

Now, the contributions that I made were extensive as well. I did the initial write-up with a few verbal comments and suggestions from my group. I did the initial write-up, and my group revised it for grammar. I also implemented ideas such as the jack-knife sampling as suggested by Pickens. I generated the histograms that are shown as well as constructed the table (we were doing this in Google Docs). I helped fact-check the derivations section. Following this process, Siang and I made a joint effort to update my initial write-up to coincide with our choice of the minMax estimator over the ML estimator.

I also contributed the References section in order that the reader could look at the material from which I designed the report. After writing the report in Google Docs, we transferred everything into R Markdown as suggested by our Professor Adam Loy in order to allow the printed variables to be dynamic (so that each time we knit the document our report will display slightly different values for the variables). As a matter of necessity, I converted all the

equations from the Google Doc into LaTeX format. Thus, all the equations in this report were stylized by me, and their content was generated in a group setting.