Study 1:

This study has a very thorough methods section which describes exactly how the data was acquired and how it was analyzed. Thus, I think that this study is easily reproducible if the same samples are used by a different lab group. I think that this study is also robust because they outline any potential sources of error, such as the feces coming in contact with the diapers, and what steps were taken to prevent the error from occurring. It would also be easy to follow the same methodology with a different data set and see if their findings are generalizable to further add to the robustness of the study.

Study 2:

This study is not reproducible because even though the data is public, the code was not released. Thus, other researchers cannot reproduce the code and see if it would provide the same results while using the same data set. I would also argue that we cannot determine the robustness of the study until the code is released and analyzed for any flaws in logic. However, until then, the GUI can be used to analyze similar but different data sets to see how generalizable the tool is. Until then, due to the lack of information on the code and methodology, this study needs to be deemed as not robust.

Study 3:

I believe that this study is reproducible because the data that they used is available to the public and they also outlined the statistical equations that they used for each calculation in the methods section. I also think that this study is mostly robust because many of the used equations are taken from other studies that have already been peer reviewed. This shows the generalizability of the equations used to analyze the data. Once the novel equations are tested using other data sets, I believe that this study can be deemed completely robust.

Study 4:

I believe that this tool is both reproducible and robust. It is reproducible due to the code being publicly released and the extensive documentation that comes with the code. It is also robust because the tool is based on several well established public tools. Thus, as long as the new tool functions properly with novel data sets, it can be considered robust.

Study 5:

I believe that this study is reproducible because they list all the statistical analysis that they did in the methods section. They also provided where they gathered the data from and it is publicly available. I also think that this study is robust because almost all of the statistical analysis done was using basic functions or established methods. This makes their methodology very easy to apply to other data sets to validate their results.