

We encountered a few issues where a lot of time was wasted due to poor planning and not exploring our options. Our first attempt at correctness testing mimicked brute force too closely, and we realized that comparing the data of our correctness testing and our brute force algorithm could miss certain edge cases. Our first attempt at generating a circular set of points was also overly complicated, but looking for better options ended with a simpler and more robust algorithm. We learned from this to come up with multiple options before deciding on an implementation.

Comparing the time taken to compute the convex hull using brute force and quick hull showed extreme differences, and this solidified the importance of choosing an algorithm of the best known efficiency. Most of the code that we have written so far through schooling has been tested on a small scale where the difference in efficiency would not be noticeable, but the knowledge of how to analyze the complexity of an algorithm and the importance of choosing a good algorithm will be invaluable.