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Project 1
Graph Analysis
January 31, 2011

To analyze the efficiency of both modifications of the data structure, I ran tests using the desired N's twice over and average results. The results can be found in the document Project1Analysis.pdf.

Execution times for the two implementations are very different. The weighted quick union has faster execution times across the board versus the quick find method. However, both methods have similar execution times for small N's, however, the weighted quick union is much faster at large N's. As a result, the quick find graph rises much faster than the graph of the weighted quick union.

As far as the p^* estimates are concerned, even though the trend lines appear very different, they really don't differ much, but it just appears that way because of the scale. The values only differ from .5895 to .5945, a difference of just .005. However, one thing that can be seen by the trend lines is that as the N (size of the grid) increases, the p^* estimate trends toward the average proved by theorists, .593.