Convex Optimization: Homework 4
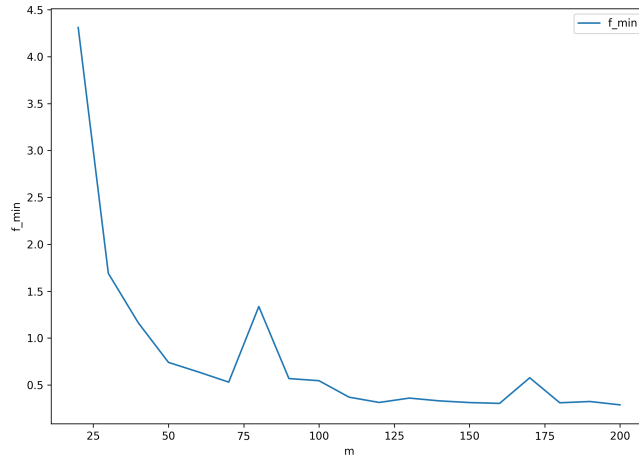
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Answer 1

Bonus

Figure 1: Minimum loss value achieved vs m

To analyse the effect of m, I plotted the minima achieved by all every 10th value of m, starting from $m = 20$, and ending at $m = 200$. The above figure clearly shows that over parameterization helps in reaching better minimas. Though the improvement decreases after m has been increased enough. Based on this plot, one should surely use overparameterization, but only upto a certain limit, as their is not additional benefit on increasing the parameters and will only increase the evaluation time.