Assignment 3

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Problem 1:

n	Iterations
5	6
8	19
12	51
20	118

Error Plot For n=20:
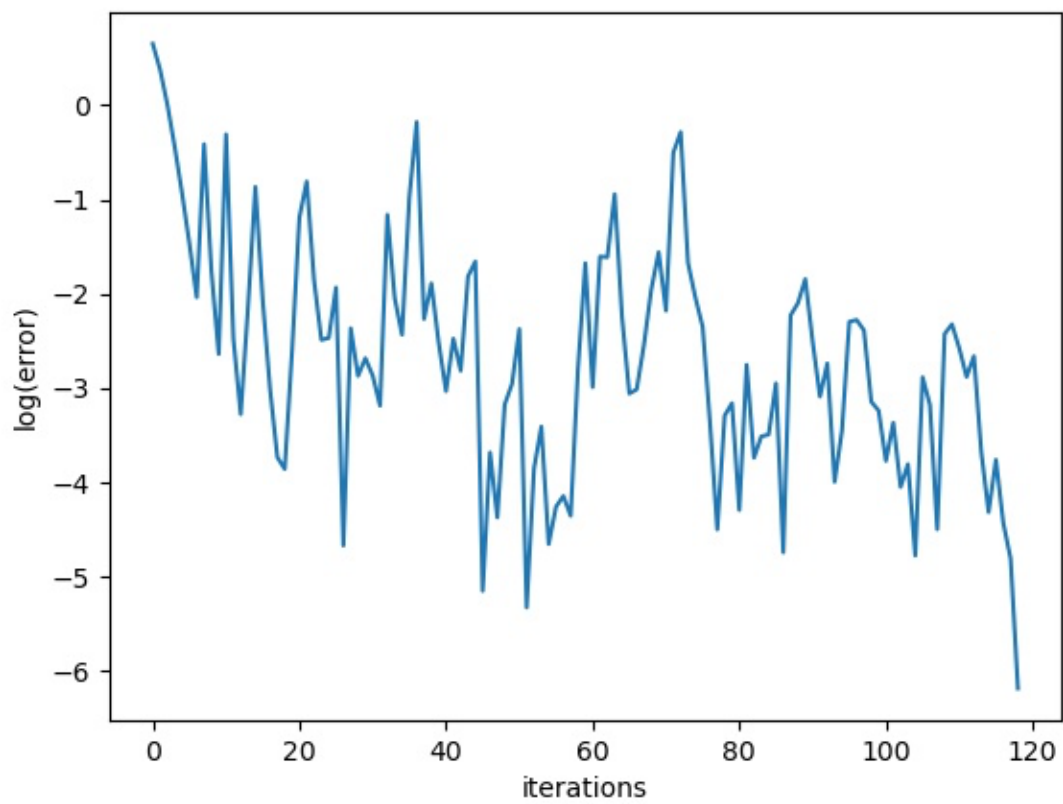
Problem 2

Iteration	Steepest Gradient Descent	DFP with Exact Line Search	DFP with Backtracking line search
1	$4.453*10^1$	$4.45295793*10^1$	$3.56585693*10^3$
2	$1.47323358*10^{-1}$	$6.28234570*10^{-2}$	$5.37863831*10^2$
3	$5.59582171*10^{-4}$	$7.19699868*10^{-5}$	$8.35703270*10^1$
4	$2.23150826*10^{-6}$	$6.02975306*10^{-8}$	$1.29967003*10^1$
5	$9.06588684*10^9$	$2.76180926*10^{-11}$	2.02177766
6	$3.70823289*10^{-11}$	$9.69851804*10^{-43}$	$3.14511276*10^{-1}$