

Homework 3

1. Added termination criterion

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initial point	$f(x, y)$	Convergence Points(x, y)			BFGS
		Steepest descent	Newton's	SR1	
[1.2, 1.2]	(a)	[2.003, 2.003]	[2, 2]	[2, 2]	[2, 2]
	(b)	[1, 1]	[1, 1]	[1.000, 1.000]	[1.016, 1.027]
	(c)	[2.999, 0.501]	fail[0.041, 1.001]	fail[1.2, 1.2]	fail[7.11,-1.59]
[5.6,-1.2]	(a)	[1.999, 1.999]	[2, 2]	[2, 2]	[2, 2]
	(b)	[0.999, 0.991]	fail[-152.879, 563.325]	[1, 1]	[1, 1.000]
	(c)	[3.000, 0.4980]	fail[0.007, 1.026]	fail[5.6, -1.2]	fail[5.6, -1.2]
[-3.5,2.3]	(a)	[1.999, 1.999]	[2, 2]	[2, 2]	[2, 2]
	(b)	[0.996, 0.986]	fail[-nan, -nan]	[1, 1]	[1, 1]
	(a)	[1.999, 1.999]	[2, 2]	[2, 2]	[2, 2]
[10.5,-8.3]	(b)	[0.991, 0.988]	fail	fail	fail
	(c)	[8.821, 0.972]	fail	fail	fail