GREG BALES HW #4
COMPARING NEWTON'S METHOD TO BFGS QUASI-NEWTON

NEWTON					
	Problem	F*	Iterations	norm(F*)	
	1	1.4583E-21	16	2.5887E-10	
	2	2.5906E-01	20001	2.9892E-02	slow convergence
	3	1.1279E-08	4	2.4693E-16	
	4	1.6760E-17	89	2.7687E-05	
	5	8.7919E-16	11	1.7897E-08	
	6	5.3376E+02	7	1.5965E+02	
	7	4.8011E-05	20001	7.8242E-05	slow convergence
	8	3.1292E-02	16	4.5768E-01	
	9	8.8033E+01	20001	6.4445E-02	slow convergence
	10	3.2030E-26	9	3.5794E-07	
	11	8.5822E+04	23	8.5821E-03	
	12	4.8017E-22	122	2.2671E-10	
	13	1.0101E-07	17203	5.1810E-10	
NA	14	3.8948E+24	2055	3.7026E+16	Singular Hessian
	15	6.0796E-01	20001	3.1187E+00	slow convergence
	16	6.1723E-18	8	6.8849E-09	
	17	7.6809E-11	38	9.7672E-05	
	18	5.4911E-03	20001	1.4533E-02	

BFGS			
Problem	F*	Iterations	norm(F*)
1	3.2840E-15	33	1.5070E-06
2	5.2356E-18	124	5.2823E-09
3	1.1279E-08	4	7.9478E-13
4	5.4190E-19	166	1.0488E-04
5	3.4781E-15	33	2.2788E-07
6	5.3765E+02	21	6.8188E+02
7	1.3998E-06	102	6.3176E+06
8	4.8986E-02	52	6.0297E-01
9	8.8032E+01	199	2.3282E-03
10	3.9930E-18	85	3.8865E-03
11	8.5822E+04	22	1.5015E-02
12	6.7635E-17	56	7.2133E-08
13	6.3833E-06	59	3.5530E-10
14	1.6691E-11	210	1.0053E-05
15	2.3804E-08	285	1.5618E-05
16	1.5800E-19	17	1.7507E-09
17	1.0224E-12	84	2.8942E-05
18	5.3863E-03	372	1.7070E-08

Terminate iterations when Tolerance = 1e-8*norm(grad(x0))