

>> Q2

Iteration	Func-count	f(x)	Step-size	First-order optimality
0	2	8		12
1	4	1	0.0833333	3
2	6	0.296296	1	1.33
3	8	0.064	1	0.48
4	10	0.015625	1	0.188
5	12	0.00364133	1	0.071
6	14	0.000863837	1	0.0272
7	16	0.000203542	1	0.0104
8	18	4.80841e-05	1	0.00397
9	20	1.1348e-05	1	0.00151
10	22	2.67918e-06	1	0.000579
11	24	6.32443e-07	1	0.000221
12	26	1.49301e-07	1	8.44e-05
13	28	3.5245e-08	1	3.22e-05
14	30	8.3202e-09	1	1.23e-05

Local minimum found.

Optimization completed because the size of the gradient is less than the value of the optimality tolerance.

<stopping criteria details>

X1 =

0.0020

FVAL1 =

8.3202e-09

EXITFLAG1 =

1

output1 =

struct with fields:

```

    iterations: 14
    funcCount: 30
    stepsize: 0.0013
    lssteplength: 1
    firstorderopt: 1.2318e-05
    algorithm: 'quasi-newton'
    message: 'Local minimum found. Optimization completed because the size of the
gradient is less than the value of the optimality tolerance.<stopping criteria
details>Optimization completed: The first-order optimality measure, 9.475532e-07, is
less than options.OptimalityTolerance = 1.000000e-06.'
```

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