```
>> Q3
 Iter  Func-count            Fval   Feasibility   Step Length       Norm of   First-order
                                                                       step    optimality
    0           3    9.244900e+02     0.000e+00     1.000e+00     0.000e+00     5.030e+02
Objective function returned Inf; trying a new point...
    1           7    3.800923e+02     0.000e+00     7.000e-01     7.256e-01     1.121e+03
Objective function returned Inf; trying a new point...
    2          27    3.320016e+02     0.000e+00     2.326e-03     2.828e-01     1.279e+03
Objective function returned Inf; trying a new point...
    3          31   -2.653607e+02     0.000e+00     7.000e-01     2.115e-01     4.138e+03
Objective function returned Inf; trying a new point...
    4          35   -8.791418e+02     0.000e+00     7.000e-01     7.269e-02     1.399e+04
Objective function returned Inf; trying a new point...
    5          39   -1.490422e+03     0.000e+00     7.000e-01     2.629e-02     4.690e+04
Objective function returned Inf; trying a new point...
    6          43   -2.088830e+03     0.000e+00     7.000e-01     8.887e-03     1.532e+05
Objective function returned Inf; trying a new point...
    7          47   -2.657698e+03     0.000e+00     7.000e-01     2.722e-03     4.639e+05
Objective function returned Inf; trying a new point...
    8          51   -3.137587e+03     0.000e+00     7.000e-01     7.320e-04     1.009e+06
Objective function returned Inf; trying a new point...
    9          55   -3.325741e+03     0.000e+00     7.000e-01     1.637e-04     1.895e+06
Objective function returned Inf; trying a new point...
   10          67   -3.338965e+03     0.000e+00     4.035e-02     1.955e-03     2.074e+06
Objective function returned Inf; trying a new point...
   11         114   -3.340557e+03     0.000e+00     1.529e-07     1.550e-04     3.679e+05
Objective function returned Inf; trying a new point...
   12         142   -3.342003e+03     0.000e+00     1.341e-04     8.364e-04     3.835e+05
   13         145   -3.346378e+03     0.000e+00     1.000e+00     2.325e-04     7.725e+05
   14         148   -3.348663e+03     0.000e+00     1.000e+00     4.613e-05     2.207e+05
   15         151   -3.348952e+03     0.000e+00     1.000e+00     8.825e-06     4.274e+04
   16         154   -3.348962e+03     0.000e+00     1.000e+00     1.372e-06     3.137e+03
   17         157   -3.348962e+03     0.000e+00     1.000e+00     1.062e-07     4.173e+01

Local minimum possible. Constraints satisfied.

fmincon stopped because the size of the current step is less than
the value of the step size tolerance and constraints are
satisfied to within the value of the constraint tolerance.

<stopping criteria details>

thetahat =

   1.0e-03 *

    0.2717
    0.0752


fval =

  -3.3490e+03


exitflag =

     2
```

```
output =

  struct with fields:

         iterations: 17
          funcCount: 157
          algorithm: 'sqp'
            message: '↵Local minimum possible. Constraints satisfied.↵↵fmincon stopped↙
because the size of the current step is less than↵the value of the step size tolerance↙
and constraints are ↵satisfied to within the value of the constraint tolerance.↙
↵↵<stopping criteria details>↵↵Optimization stopped because the relative changes in all↙
elements of x are↵less than options.StepTolerance = 1.000000e-06, and the relative↙
maximum constraint↵violation, 0.000000e+00, is less than options.ConstraintTolerance =↙
1.000000e-06.↵↵'
    constrviolation: 0
           stepsize: 1.0624e-07
       lssteplength: 1
      firstorderopt: 41.7298

>>
```