Homework 2

CP: optimality conditions

Homework 2

- Step 1 (2 points out of 10): Formulate mathematically your own constrained NLP problem: complex enough (see last slide) & useful in practice (if possible). Be precise and rigorous.

- Step 2 (3 points out of 10): Solve your own constrained NLP problem using GAMS. Verify and document that the solution found is a minimizer.

Homework 2

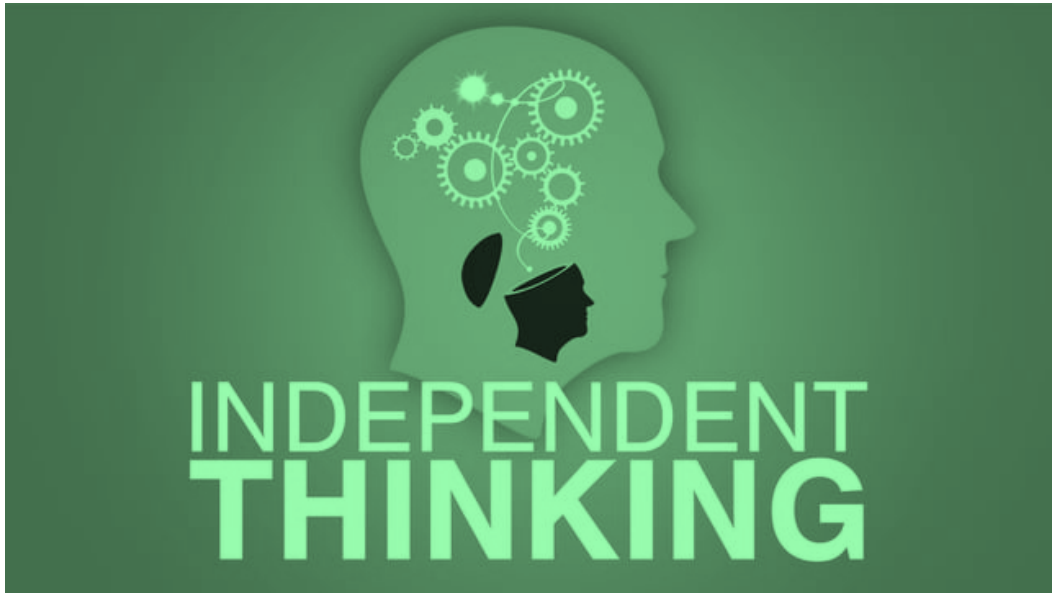
- Step 3 (4 points out of 10): Derive and solve the FONC of your own constrained NLP problem using Octave. Make sure that this solution coincided with that obtained in Step 2.

- Step 4 (1 points out of 10): Discuss the two solution procedures (Steps 2 and 3) and document the difficulties that you have found.

Homework 2

Make sure that your problem is complex enough:

- At least 3 optimization variables.
- At least 2 inequality constraint (not bounds).
- At least 1 equality constraint.
- The objective function should be nonlinear.
- At least 1 constraint should be nonlinear.


INDEPENDENT
THINKING