1. Does the first-order condition hold when is the optimal solution of a constrained problem?

2. The number of inflection points in?

3. For , use CG with forward accumulation to compute the partial derivative of wrt at). Label the intermediate values and partial derivatives as they are propagated through the CG.

4. The gradient of wrt is

5. . Use bisection method to find an interval containing the minimizer of starting with the interval