Due: __________________

Steepest Descent

Implement the steepest descent algorithm, with back-tracking line search starting at $\alpha = 1.0$, and objective function given by Rosenbrock’s Banana:

$$f(x_1, x_2) = 100(x_2 - x_1^2)^2 + (1 - x_1)^2$$

Test your routine with starting points $x = [1.2, 1.2]^T$ and $x = [1.0, 4.0]^T$.

Your report should include a description of the algorithms used for the basic search and line search, the values of any special parameters in the algorithm, and the termination criteria used. In addition give the final point, as well as the number of iterations required.