Question 3 -- implement algorithms

Algorithm 1: Method of Steepest Descent (no preconditioning): 18055 iterations

Algorithm 1: Method of Steepest Descent (with preconditioning): 68 iterations

Algorithm 1: Conjugate Gradient Descent (no preconditioning): 234 iterations

Algorithm 1: Conjugate Gradient Descent (with preconditioning): 20 iterations

I noticed that each of the four algorithms produced the following matlab image, showing local convergence at the origin point
(see Generated_3_fig for the image produced.)

Once could tell with the preconditioning that it saved both on time and iterations. Additionally, by writing an algorithm
that only required minimal usages of inverse matrix computation (not using inv, but '\'), the algorithm converged quickly.

One may also notice that The conjugate gradient strongly outperforms the method of steepest descent in both categories of iterations.
This is because of orthogonality of the search directions, we ensure we do not repeat a step along a direction we've searched before.