Method_of_Steepest_Descent seems to take the largest amount of iterations(~35000 iterations) before finally converging at norm(b) < eps(1)*norm(b). This is expected due to the lack of preconditioning to the matrix A

Method_of_Steepest_Descent_ichol cuts this down to less than 100 iterations. The preconditioning of the Matrix A using the following line of matlab code:

L = ichol(sparse(A), struct('type','ict','droptol',6e-4,'michol','off'));

Dramatically reduces the number of iterations needed to converge

CG took roughly 200 iterations before finally converging at norm(b) < eps(1)*norm(b). This is much more efficient than Method_of_Steepest_Descent, most likely due to the calculation of gamma in addition to the calculation of alpha

PCG took roughly 40 iterations before finally converging at norm(b) < eps(1)*norm(b). This is the most efficient algorithm in terms of number of iterations. This efficiency is partly granted by the preconditioning line seen below:

L = ichol(sparse(A), struct('type','ict','droptol',1e-3,'michol','off'));

This, coupled with the calculation of gamma seen in CG, enables convergence in the least number of iterations