# Final Observation

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- When I used norm(r)>eps*(b) as the stopping criteria, iterations ended quite quickly. Niters for the method of the steepest descent without preconditioning was 68. However, when I used my own criteria (any(abs(r)>=1e-24)), niters was 7726. In contrast, using incomplete Cholesky factorization with droptol=1e-4, the process was done in four iterations (c.f. the given droptol of 1e-2 did not help). Lastly, when I dropped the tolerance to 1e-10, the process was done in mere two iterations.
- As for the conjugate method, my code completed the calculation in 19 iterations. Using incomplete Cholesky factorization with droptol=1e-4, 11 iterations were enough. With the droptol of 1e-10, the process was done in mere two iterations.
- Although the total iterations may matter, I suppose the number of calculations in each iteration should also be considered. It looks like preconditioned versions did not save much time (in my case, my desktop specs are 8-core 16-thread i9-9900K @5.0GHZ, 32GB DDR4 3200, PCI-E MVNE 2TB, RTX 3070 8GB) because they had to calculate triangular solves and used more time per iteration.