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Part 2: Convolutional Codes

The Jacobi method and the Gauss-Seidel method are both iterative methods. Although both methods are used to solve linear systems, there are differences between Jacobi and Gauss-Seidel. One difference is that Jacobi iterations take approximately two times as many iterations to get to the solution as the Gauss-Seidel method. This means that the Gauss-Seidel method converges two times faster than the Jacobi method. Also, for tridiagonal matrices, both the Jacobi and Gauss-Seidel methods converge or diverge simultaneously.

The length of the initial stream generally does not have an effect on the number of iterations required to achieve a given tolerance. However, the farther away the initial guess is from the original solution, the more number of iterations it will take for the iterative methods to get to the error tolerance.