**Convolutional Codes**

**Conditions:**

Use the Jacobi and Gauss-Seidel methods to calculate the randomly generated binary vector from its encoded binary outputs and and determine their errors

**Discussion:**

The Jacobi method’s number of iterations to meet an error value varies depending on its input, including its initial length of . The Gauss-Seidel method, however, consistently takes the same amount of iterations for all lengths of to achieve the error desired. Thus, the Jacobi method’s initial vector has an effect on the number of iterations required to achieve the error tolerance while the Gauss-Seidel method does not.