

Lab 12

1. Write an Excel macro that uses Jacobi iteration in Excel to estimate a solution for the following system of equations. The macro should be driven by an ActiveX button control. Each click of the button should cause the next term of the iteration to be calculated. Save as a macro enabled worksheet.

$$\begin{aligned}3x - y + z &= 4 \\ -x + 4y + 2z &= 7 \\ 5x - 2y + 8z &= 19\end{aligned}$$

2. Write an Excel macro that uses Jacobi iteration in Excel to estimate a solution for the following system of equations. The macro should be driven by an ActiveX button control. Each click of the button should cause the next term of the iteration to be calculated. Save as a macro enabled worksheet.

$$\begin{aligned}4x + y + w &= 1 \\ x + 4y + z + v &= 2 \\ y + 4z + w &= -1 \\ x + z + 4w + v &= 2 \\ y + w + 4v &= 1\end{aligned}$$