1. Use Gaussian elimination to solve the system $S_1 = \begin{cases} x + y \quad\ = 1 \\ \quad\ 2y - z = -4 \\ x + y + z = 4 \end{cases}$

2. Use Gaussian elimination to solve the system $S_2 = \begin{cases} x - 5y + z = 2 \\ x - 4y + z = 2 \\ 2x \quad\ + z = 5 \end{cases}$

3. Use Gaussian elimination to solve the system $S_3 = \begin{cases} x_1 + x_2 + 3x_3 = 5 \\ x_1 + 2x_2 + 4x_3 = 6 \end{cases}$