Section 8.1

Problem 1. Use matrices to solve the system of equations (if possible). Use Gaussian elimination with back substitution or Gauss-Jordan elimination.

1) $\begin{cases} 3x + y = 4 \\ 5x + 4y = 2 \end{cases}$

2) $\begin{cases} x - 4y = 2 \\ -3x + 12y = -6 \end{cases}$

3) $\begin{cases} x - 2y + 5z = 2 \\ x - 2y = -3 \\ y - 4z = 1 \end{cases}$

4) $\begin{cases} 2x - 2y + 3z = -4 \\ 2x + 3y + 4z = -1 \\ x - 3y + z = -3 \end{cases}$

5) $\begin{cases} 2x + 3z = 3 \\ 4x - 3y + 7z = 5 \\ 8x - 9y + 15z = 9 \end{cases}$