1. **(4 points)** Solve the following system of equations. Show your work.

$$\begin{cases} 3x - 2y = 1 \\ x + 3y = -7 \end{cases}$$

2. **(6 points)** In pre-decimal British currency, a sixpence is a coin worth 6 cents, and a penny is a coin worth 1 cent. We have a collection of 70 coins of these two types which have a total value of 240 cents (or a pound sterling). Set up and solve a system of equations to determine how many coins of each type we have.

3. **(5 points)** Solve the following system of equations. Show your work.

$$\begin{cases} x - 2y + z = -5 \\ 2x + 3y = 8 \\ 3x - 6y - 4z = -1 \end{cases}$$