



**Question 3.** (2 marks) Consider the following augmented matrix of a consistent linear system.

$$\begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \\ 2 & 4 & 6 \end{bmatrix}$$

Find a row which can be removed from the augmented matrix to make a new system with two equations which has the same number of solutions. Justify.

**Question 4.** (2 marks) Illustrate **all** relative positions of lines in a consistent linear system consisting of three lines.

**Question 5.** (3 marks) Find the solution set of the following equation  $4x_1 - x_2 + x_3 + \lambda x_4 = 1$ . Find  $\lambda$  if a particular solution is  $(x_1, x_2, x_3, x_4) = (1, 1, 1, 1)$ .