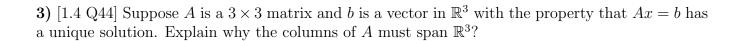
1) [1.3 Q13] Determine if b is a linear combination of the vectors formed from the columns of the matrix A.

$$A = \begin{bmatrix} 1 & -4 & 2 \\ 0 & 3 & 5 \\ -2 & 8 & -4 \end{bmatrix}, \ b = \begin{bmatrix} 3 \\ -7 \\ -3 \end{bmatrix}$$

2) [1.5 Q21] Describe and compare the solution sets of $x_1 + 9x_2 - 4x_3 = 0$ and $x_1 + 9x_2 - 4x_3 = -2$.



^{4) [1.5} Q38] Suppose Ax = b has a solution. Explain why the solution is unique precisely when Ax = 0 has only the trivial solution.