MATH 335 Quiz 7 Name:

Show all work. 20 points .

1) Find the closest point to $\mathbf{y} = \begin{bmatrix} 3 \\ 1 \\ 5 \\ 1 \end{bmatrix}$ in the supspace spanned by $\mathbf{v_1} = \begin{bmatrix} 3 \\ 1 \\ -1 \\ 1 \end{bmatrix}$ and $\mathbf{v_3} = \begin{bmatrix} 1 \\ -1 \\ 1 \\ -1 \end{bmatrix}$

2) Find the equation of the least squares line that best fits the points $(0, 1)$, $(1, 1)$, $(2, 2)$, $(3, 2)$.