

MA 371 10/6/03 Quiz 4. **NAME:**

You may use a calculator; show all other work.

1. Let $A = \begin{pmatrix} 3 & 2 \\ 1 & -1 \end{pmatrix}$. Find elementary matrices E_1 , E_2 , and E_3 such that $E_1 E_2 E_3 A = I$.

2. Show that the vectors are linearly independent, or show that they are linearly dependent.

(a) $v_1 = (1, 1, 0)$, $v_2 = (1, 2, 1)$, $v_3 = (3, 2, 1)$.

(b) $v_1 = (1, 2, 0, 2)$, $v_2 = (-1, 1, -2, 1)$, $v_3 = (2, 1, 2, 1)$.