## Math 228: Intro to Lin Alg & Diff Eqns Quiz 5 $Feb.\ 28,\ 2002$

1. a) Find a basis of the row space of the matrix 
$$A = \begin{bmatrix} 1 & 2 & -1 & 3 \\ -2 & -3 & 5 & -2 \\ 3 & 7 & 2 & 15 \\ 1 & 3 & 4 & 9 \end{bmatrix}$$

b) Find the dimension of NS(A).

2. Determine whether  $B = \{1 + x + x^2, 1 - x + x^2, 1 + x - x^2\}$  is a basis of  $P_2$ , the vector space of polynomials of degree  $\leq 2$ .