

Name:

1. Find a basis for $NS(A)$, where

$$A = \begin{pmatrix} 3 & 4 & 1 & -1 & 3 \\ 1 & 1 & 1 & 0 & 1 \\ 2 & 2 & -2 & 2 & -2 \end{pmatrix}.$$

2. Find a basis for the subspace $T = \{f \in P_3 \mid f'(2) = 0\}$ of P_3 .