Name: Thursday section time:
Student ID:

Math 20F - Linear Algebra - Spring 2003

Self-Assessment Quiz #2.5 — April 25

(This quiz is not to be handed in. Check answers against solutions on back.)

1. Find the determinant of the following matrix:

$$\begin{pmatrix} 1 & 2 & 1 & 2 \\ 2 & 4 & 2 & 2 \\ 2 & 3 & 6 & 4 \\ -1 & 0 & 2 & 2 \end{pmatrix}.$$

2. Let $\mathbf{v} = (-3,\ 3,\ 1,\ 1)^T$, $\mathbf{u}_1 = (1,\ 4,\ 3,\ 2)^T$, $\mathbf{u}_2 = (1,\ -2,\ -1,\ 0)^T$, and $\mathbf{u}_3 = (1,\ 1,\ 1,\ 1,\ )^T$. Is $\mathbf{v} \in Span(\mathbf{u}_1, \mathbf{u}_2, \mathbf{u}_3)$? Prove your answer. If "Yes", express $\mathbf{v}$ a linear combination of $\mathbf{u}_1$, $\mathbf{u}_2$, and $\mathbf{u}_3$.