

Name:
Student ID:

Thursday section time:

Math 20F - Linear Algebra - Spring 2003

Self-assessment Quiz #5.5 — May 22

This quiz is not to be handed in. Answers on the back side.

You must show your work in order to get credit for a problem. **Label your answers clearly.**

1. Let $\mathbf{u}_1 = (1, 1, 1, 0)^T$ and $\mathbf{u}_2 = (0, 1, 1, 1)^T$. Let $U = \text{Span}(\mathbf{u}_1, \mathbf{u}_2)$.
Find a basis for U^\perp .

- 2 Find the linear function that best approximates data

$$\begin{array}{c|c|c|c|c} x & -2 & 0 & 1 & 2 \\ \hline y & 2 & 0 & 1 & 2 \end{array}$$

in the least squares sense.