Quiz # 6

April 3, 2008

1. Find a basis for the kernel and range of the linear transformation $L\colon \mathbb{R}^3 \to \mathbb{R}^2$ given by
$$L(\mathbf{v}) = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 5 \end{bmatrix} \mathbf{v}.$$

2. Use Gram-Schmidt to turn $\{(1,1,3),(0,3,1),(1,1,0)\}$ into an orthogonal basis (it doesn't have to be orthonormal).