Math 224
Daily Objectives
Class Session 6
Thursday, September 13, 2007

2.1: Independence and Dimension

- Example 1: Find a basis for $W = \text{sp}([2,3], [0,1], [4,-6])$ in $\mathbb{R}^2$ (done in class)

- Def. 2.1: Linear Dependence and Independence

- Thm. 2.1: Alternative Characterization of a Basis

- How to find a basis for $W = \text{sp}(\mathbf{w_1}, \mathbf{w_2}, \ldots, \mathbf{w_k})$

- How to determine whether a given set of vectors is linear dependent or independent

- Definition 2.2: Dimension

- How to determine the dimension of a subspace

- Thm. 2.3: Existence and Determination of Bases

- How to enlarge an independent set of vectors to form a basis for $\mathbb{R}^n$