

Math 224
Daily Objectives
Class Session 5
Tuesday, September 11, 2007

1.6: Homogeneous Systems, Subspaces, and Bases

- Definition of homogeneous system
- Structure of the solution set of $Ax = 0$ (Thm. 1.13)
- Definition of subspace
- Subspace property of span (Thm. 1.14)
- Column space criterion
- Definition of basis
- Unique linear combinations (Thm. 1.15)
- Equivalent conditions for $n \times n$ matrix to be invertible (Thm. 1.16)
- Equivalent conditions for $m \times n$ matrix to be invertible (Thm. 1.17)
- Homework problem: Theorem 1.18 (Structure of the solution set of $Ax = b$)