18.702 Problem Set 3

due Thursday, March 2

1. Chapter 10, Exc. M.5 (diagonalizing commuting matrices)
2. Chapter 11, Exc. 3.4 (a homomorphism $\mathbb{C}[x, y] \to \mathbb{C}[t]$)
3. Chapter 11, Exc. 3.9 (unipotent and nilpotent elements)
4. Chapter 11, Exc. 6.8 (Chinese Remainder Theorem)
5. Chapter 11, Exc. M.3 (maximal ideals in a ring of sequences)