

**Homework Feb. 2, 706, Spring 2012, due: February 17**

- 1) Problem 4 of chapter 1 of Sakurai. In part (c) just work out  $f(A)$  for a function  $f$  of  $A$ , instead of  $\exp[if(A)]$ . You may assume that  $f$  has a Taylor expansion around 0.
- 2) Problem 18 parts (b) and (c) of chapter 1 of Sakurai. (We already did part (a) in class.) Perform the “explicit calculations” of part (c).
- 3) Problem 21 of chapter 1 of Sakurai. Do not use Mathematica (or other integral tables)! (You can use Mathematica to check your results, but I want to see a calculation of the necessary integrals.)
- 4) Problem 26 of chapter 1 of Sakurai.