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.