

Homework March 10, 706, Spring 2011, due: March 18

- 1) Problem 1 of chapter 3 of Sakurai and Napolitano.
- 2) Problem 3 of chapter 3 of Sakurai and Napolitano. [Hint: in part (b) the idea is to write U as $\exp(-i\boldsymbol{\sigma} \cdot \hat{\mathbf{n}}\phi/2)$, and express $\hat{\mathbf{n}}$ and ϕ in terms of a_0 and \mathbf{a} . Take $a_0 > 0$ and $0 \leq \phi < 2\pi$.]