1. Problem 1 of chapter 6 of Srednicki’s text.

2. Problem 3 of chapter 7 of Srednicki’s text. In part (c), it suffices to verify Eq. (7.16).

3. Problem 4 of chapter 7 of Srednicki’s text. It maybe helpful to use that $|e^{iB}|^2 = e^{-2\text{Im}B}$. 