1 (15 points) Give the details of the derivation of Eq. 38.18 on pages 240 of Srednicki.

Solve the following problems from Srednicki.

- **2** (20 points) Problem 37.1 on page 236.
- **3** (15 points) Problem 38.1 on page 243.
- 4 (15 points) Problem 38.2 on pages 243.
- **5** (15 points) Problem 38.3 on pages 243.
- **6** (20 points) Problem 38.4 on pages 243.