Solve the following problems from Srednicki.

- 1 (15 points) Problem 33.1 on page 208.
- **2** (15 points) Problem 33.2 on page 208.
- **3** (25 points) Problem 34.3 on pages 215.
- **4** (15 points) Problem 34.4 on pages 215.
- **5** (15 points) Problem 35.3 on pages 220.
- **6** (15 points) Problem 35.4 on pages 220.