Please solve the following exercises from the book:

Chapter 1: Exercises 49, 50, 56, 57.

Chapter 2: Exercises 15, 20, 27;
Exercise 40: Show that there is an open set of real numbers that has a boundary of positive measure. (Hint: consider the complement of suitably defined generalized Cantor sets.)

Chapter 3: Exercises 8, 13, 22, 31.