Most of these problems are from “Multivariable Mathematics” by T. Shifrin. I recommend at least thinking about all the exercises, even if they are not assigned, as you read through the textbook. I also recommend trying to prove all the Theorems which are left unproven in the book.

Problem 1. From Exercises 8.2 (Shifrin): 13
Problem 2. From Exercises 8.4 (Shifrin): 4, 6, 12, 15, 20, 22
Problem 3. From Exercises 8.5 (Shifrin): 1, 2, 10, 11