Exercises for Week 7

The work handed in should be entirely your own. You can consult Gamelin and/or the class notes but nothing else. To receive full credit, justify your answer in a clear and logical way. Due Mar. 13.

Reading. Read Sections 3.5, 4.1, 4.2 of the textbook carefully (better before you attempt the homework problems).

1. Section III.5 Exercises 1, 2.

2. Section IV.1 Exercises 2 (a) (c), 4, 9.

3. Section IV.2 Exercises 1 (a), (b), (c), 2.

4. Prove the complex-valued version of the Fundamental Theorem of Calculus from the real version:
$$\int_A^B \frac{\partial F}{\partial z} dz + \frac{\partial F}{\partial \overline{z}} d\overline{z} = F(B) - F(A).$$
   (The real version is stated on the bottom of page 76 of the textbook.)