4680 Test 1 Study Guide

Test 1 covers HW 1, 2, 3.
I will put some problems that are directly from the homework on the test.
A topical breakdown for studying is below.

Computations:

- Basic complex number calculations.
  See HW 1 – problems 1, 2, 3, 4, 7.

- Solving z^n = w.
  See HW 1 – problem 5.

- Calculating e^z, sin(z), cos(z), log(z), z^w.
  See HW 2 – problems 1, 2.

- Sketching and determining sets in C.
  See HW 1 – problem 6.
  See HW 2 – problem 4, 5, 6, 7.

- Solving equations involving e, cos, sin.
  See HW 2 – problem 3.
  See HW 2 – problem 11.
  See HW 2 – problem 12.

Proofs:

- Proofs involving conjugation, abs value, Re(z), and Im(z).
  See HW 1 – problems 8, 9, 10.

- Proofs involving showing a set is open or closed.
  See HW 3 – problems 1, 2, 3.

- Proofs involving sin(z) and cos(z).
  See HW 2 – problem 8.

- Other proofs and questions.
  See HW 1 – problem 11.
  See HW 2 – problem 9, 10.