

Math 481a, Spring 2026

Test 2 Guide

The material from the following sections of the textbook is required for Test 2:

- Sec. 3.1 - Interpolation and the Lagrange Polynomials;
- Sec. 3.2 - Data Approximation and Neville's Method;
- Sec. 3.3 - Divided Differences;
- Sec. 4.1 - Numerical Differentiation;
- Sec. 10.1 - Fixed Points for Functions of Several Variables;
- Sec. 10.2 - Newton's Method.

Below, I list typical problems from each section of the textbook:

- Sec. 3.1 - Problems 1, 2, 8, 13, 14;
- Sec. 3.2 - Problems 1, 4, 5, 6, 7, 8;
- Sec. 3.3 - Problems 3, 4, 9a, 10a, 11, 12, 14, 19, 20, 21;
- Sec. 4.1 - Problems 1, 2, 24, 25, 26, 28, 29;
- Sec. 10.1 - Problems 1, 2, 3, 5, 6;
- Sec. 10.2 - Problems 1, 2, 8, 9.

In addition to the above problems, study the problems from the homeworks and the problems from the class sessions, and the practice problems posted at class' webpage.