

# Homework Assignment 9

## Due on Friday 12/6

### Programming Problems:

**Bonus Problem. Add 1 point in final grade.** Write a Matlab code that evaluates  $P'(x)$ , where  $P(x)$  is the interpolating polynomial given in the Newton form. Your code should take  $x, \{x_i, a_i\}$  as input data, where  $a_i = f[x_0, x_1, \dots, x_i]$ , and output  $P'(x)$ . Here  $x$  should be assigned as an array and output an array  $P'(x)$ .

Save your code as function M-file and submit it to ccchu@math.nthu.edu.tw

### Writing Problems:

Do the following exercise problems in the text book by Bradie,

Sec 6.2: 4, 5\*, 6\*, 8, 9\*, 11, 12, 13\*

Sec 6.3: 2, 5\*, 8\*, 12\*

Just turn in problems with \*.