

## Assignment 6.

Given Dec 1 2000, due Dec 12 2000.

**(1)** Programming:

- (a) Do exercise 3.11 (a), plot  $f$  together with  $P_{2m+1}$  in one picture.
- (b) Do exercise 3.11 (b)
- (c) Repeat (a) using Chebyshev nodes.
- (d) (extra) Repeat (a) using 13 equally spaced grid points, but instead of polynomial interpolation, perform the least square fitting.

**(2)** Write down the matrix problem (including  $A$  and  $b$ ) for cubic B-spline interpolation with Type 1 and Type 2 end conditions. (page 108)