

**CS 4390/5353**  
**Quantum Computing**  
**Home Assignment 13**

Due October 27, 2009

13. Take a linear function  $A(x)$  and a quadratic function  $B(x)$  and show how Fast Fourier transform can compute the coefficients of the product

$$C(x) = A(x) \cdot B(x)$$

of these two polynomials.