

**18.310 Take-Home Exam 2**  
**Due: before Thanksgiving 2008**

Use your 16-FFT spreadsheet to multiply a 16 decimal digit number by an 18 digit number so that each digit in the answer is given in normal order.

You can do this by performing the polynomial multiplication mod 17, 193 and 97 separately, then combining your results to get the coefficients mod the product of these primes. (If the initial coefficients were all under 100 the final coefficients will all be under the product of the primes.) Finally, you must do the carrying necessary to obtain the numerical result from the coefficients of the product polynomial.

Check your spreadsheet to be sure it works for simple input.