CS 6/73995 **Homework #3** **Par. & Dist. Comp.**

Due via email by class time on Wednesday 27 October 1999

Write a data-parallel program for the Sieve of Eratosthenes, using MPI, to find and print out all prime numbers less than 1,000,000. Do not use the MPI operations for collective communication; limit yourself to the MPI_Send and MPI_Recv operations.

Using aegis, intrepid, and vlsi, run this program on one, two , and three of these machines. Use the function MPI_Wtime (which returns a double representing the number of seconds since some fixed time in the past) to instrument the program, and to compare the running time of the program as it runs on one, two, and three processors. Is this a good program to parallelize in this way? Explain your answer.

To turn in this homework, email the program to Professor Walker (walker@mcs.kent.edu) before class time on the due date. Then, in class, turn in a printout of the program, along with your answer to the question posed in the previous paragraph.