Answer 2 of the following 3 questions for 10 points each, for a total of 20 points.

Q1. (10 points)

- (5 points) Design an parallel algorithm to compute the least common multiplier (lcm) of a sequence of n natural numbers using p processors.
- (5 points) Sketch an implementation of your algorithm using either a shared memory or message passing model.

Q2. (10 points) Implement a parallel sorting algorithm of your choice using either pthreads or MPI.

Q3. (10 points) Sketch a parallel implementation of Floyd's algorithm using either pthreads or MPI.