Shared Queue Parallel Pizza-Eating Algorithm (with Barrier and Leader-Worker)

Penelope's Parallel Pizzeria

1. Define N: How many slices of pizza? N: ☐
2. Define P: How many people? P: ☐
3. Define LEADER (a value from 0..P-1). LEADER: ☐
4. Get your own personal, unique id number (0..P-1).. id: ☐
5. If id == LEADER: q:
   - Create an empty, shared queue q, capacity N
   - While the pizza box is not empty:
     a. Get a slice of pizza from the box
     b. Append that slice to the queue q.
6. BARRIER (wait here until all PEs arrive).
7. While q is not empty:
   a. Try to remove a slice of pizza from q
   b. If successful, eat that slice.