LA Worksheet #8

1. 0000000000000000
   ⋮ 32 bytes total ⋮
   0000000000000000
   19 19 40 00 00 00 00 00
   39 30 00 00 00 00 00 00
   05 19 40 00 00 00 00 00
   70 00 40 00 00 00 00 00
   70 00 40 00 00 00 00 00

2. See attak lab guide

3. The nondeterministic behavior is due to a race condition between the 2 threads

4. a) The first code block makes the for loop run across both threads, while the second splits the for loop across both threads.
   b) The # of threads must be set before the parallel section.

5. add #pragma omp parallel for reduction(+:estimate_x, estimate_y)

6. a) Mutual exclusion - only one thread can have access to a resource at a time
   Incremental allocation - a process holds a resource while waiting for another
   No preemption - resources can't be removed from a process by force
   Circular-waiting - each thread is waiting for a resource held by another that is waiting

   b) ME - each spatula can only be held by 1 person
   IA - they each grab one spatula and can't drop it until they get a second one
   NP - they can't steal spatulas from each other
   CW - they wait for a spatula to become available