Suppose there are three threads P, Q and R, each of them has some sequential code sections and then updates a shared variable count, as shown in the below table. Define and initialize semaphores to solve the synchronization and the critical section problems. Assume that

QS2 needs to be executed after PS1 and RS1, and
PS2 and RS2 needs to be executed after QS2

```c
/* Semaphores and initial values */

P   Q   R
--- --- ---
PS1(); QS1(); RS1();
PS2(); QS2(); RS2();
count = count + 1  count = count + 2  count = count - 5
```