EECS 223, Fall 2017

Homework Set 1

Due: Oct 19, 1pm

1. A system contains 4 periodic tasks (1, 6) (3, 10) (3, 14) (4, 20). Construct the RM and EDF schedules during time [0, 30].

2. Given the following periodic task set, are they schedulable by RM? Why? (Use all test methods that we have covered without drawing the schedule.)
a. (4, 8) (4, 16) (4, 20)
b. (3, 8) (4, 10) (2, 16)

3. Design a system of 4 periodic tasks with a total utilization of 0.76, but the system cannot be scheduled to meet all deadlines using RM.

4. There are 5 periodic tasks with (execution time, period) of (3,9), (1,12), (2,14), (x,16), (y,18), respectively. What are the values for x and y so that the system has the largest utilization yet nobody misses a deadline using RM scheduling?