Submit your solutions to the following problems:

1. Solve 6.20 from Stark and Woods. Is the output random sequence WSS?
2. Solve 6.22 from Stark and Woods. In Part (b), determine if $X[n]$ is WSS.
4. Solve 6.26 from Stark and Woods. Recall that $S_{XX}(\omega)$ is real-valued.
5. Solve 6.31 from Stark and Woods.

The following exercises are for self study and group discussion:

1. Review Chapter 6 Stark and Woods before starting this homework.
2. Discuss 6.33 from Stark and Woods. Note that the problem statement “suppresses” the time indices in $f_X(\cdot | \cdot \cdot \cdot)$, but the result — that a Markov chain is reversible — does not require the Markov chain to be time-homogeneous.