HW #6


3. For AR Signals whose poles are near the unit circle, it is also better to use \( \hat{r}(k) \) with large lags. Derive overdetermined Yule-Walker equations for AR(p) signals.

4. Prove that for an AR(p) signal,

\[
S_p = S_{p+1} = S_{p+2} = \ldots
\]

This result also means that for an AR(p) signal, the linear prediction error remains constant when the linear predictor order is greater than or equal to p.