TMA4285 Time series models
Exercise 4, autumn 2015

Problem 1. Problem 3.8 a) in Wei (2006).

Problem 2. Problem 3.8 c) in Wei (2006) for $k = 1, 2, 3$. Check your results by simulating a long realisation from the model in R and estimate the PACF.

Problem 3. Problem 3.9 in Wei (2006). Check your result by simulating a long realisation in R from the model you found and estimate the ACF.

Problem 4. Problem 3.10 in Wei (2006). Again check you results via simulation in R.

Problem 5. Problem 3.11 in Wei (2006). Again check you results via simulation in R.

Problem 6. Problem 3.12 in Wei (2006). Do several simulations from the model and study the variability in the estimated ACFs and PACFs.

Problem 7. Problem 3.13 in Wei (2006).

Problem 8. Prove or disprove that any non-ivertible MA(2)-model with both roots inside the unit circle can be made invertable through reparameterization.