TS Module 6: Stationary autoregressive processes HW

(The attached PDF file has better formatting.)

Homework assignment: AR(2) process

An AR(2) process has ϕ_1 = 0.2 or –0.2 and ϕ_2 = ranging

- from 0.2 to 0.7 in steps of 0.1.
- from –0.2 to –0.9 in steps of –0.1.

Complete the table below, showing ρ_1 and ρ_2, the autocorrelations of lags 1 and 2. Use an Excel spreadsheet (or other software) and form the table by coding the cell formulas. Print the Excel spreadsheet and send it in as your homework assignment.

ϕ_1	ϕ_2	ρ_1	ρ_2	ϕ_1	ϕ_2	ρ_1	ρ_2
0.2	0.2			-0.2	0.2		
0.2	0.3			-0.2	0.3		
0.2	0.4			-0.2	0.4		
0.2	0.5			-0.2	0.5		
0.2	0.6			-0.2	0.6		
0.2	0.7			-0.2	0.7		
0.2	-0.2			-0.2	-0.2		
0.2	-0.3			-0.2	-0.3		
0.2	-0.4			-0.2	-0.4		
0.2	-0.5			-0.2	-0.5		
0.2	-0.6			-0.2	-0.6		
0.2	-0.7			-0.2	-0.7		
0.2	-0.8			-0.2	-0.8		
0.2	-0.9			-0.2	-0.9		