

For that, we use

西(B) Y(B) = 1

-(7)

prof(B)

Property of (1- \$1 B - \$2 BY - - - \$pBr) x ( 40+41B+42B+--+4PB+--)= on RHS of eqn (8) there are no possesses backshift operator Φ(B) Y (B) =1 we need. Ψ; =0, ((C) Yo = 1 -for 1 = 1, ?

The AR(P) time Series (Y1) in eqn()

is causal and stationary if
the roots of the associated

polynomial

MP-\$\phi\_1 m^{P-1} - \phi\_2 m^{P-2} - - - \phi\_p = 0

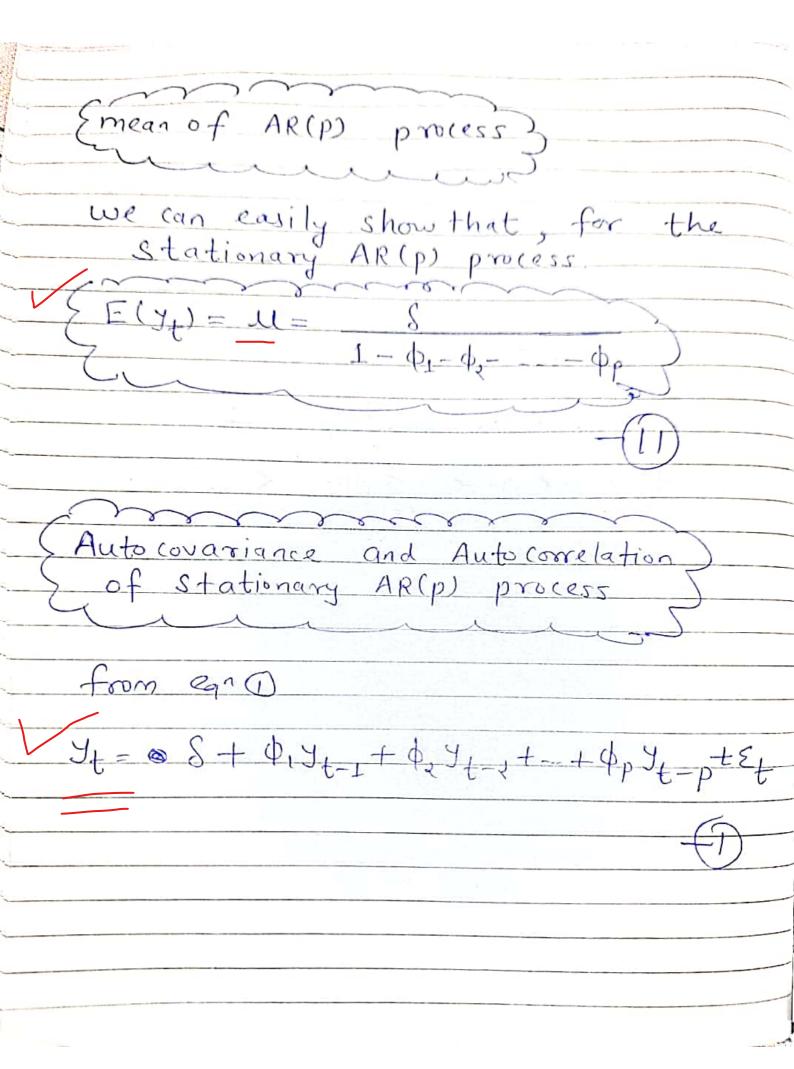
AR(2) M2 - \phi\_1 m - \phi\_2 = 0

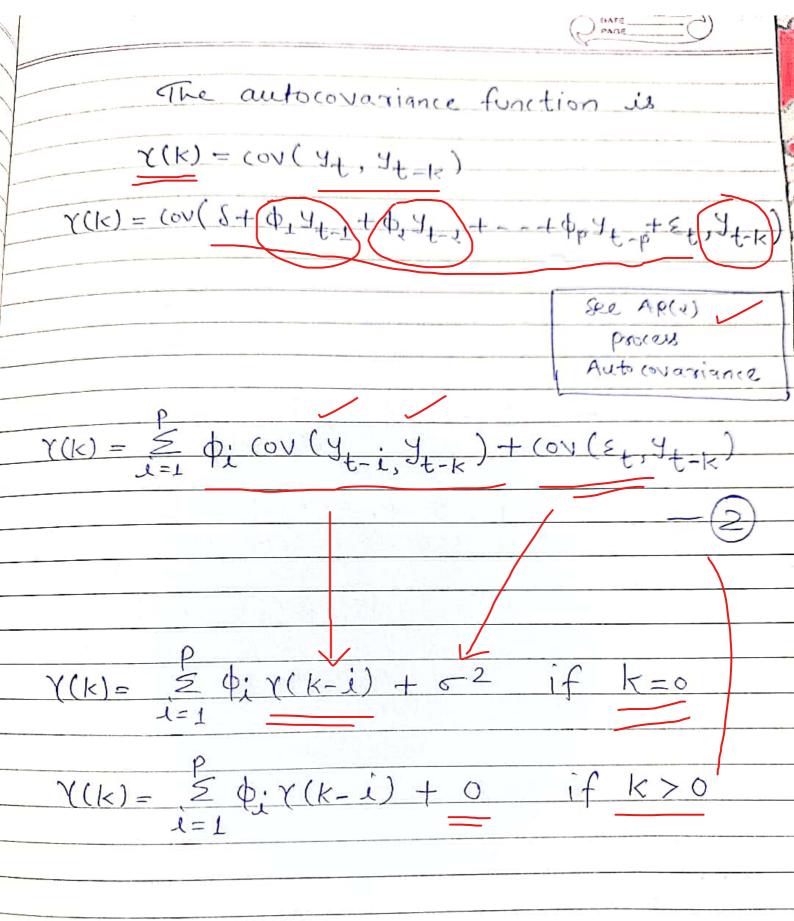
are less than one in absolute value

i.e.

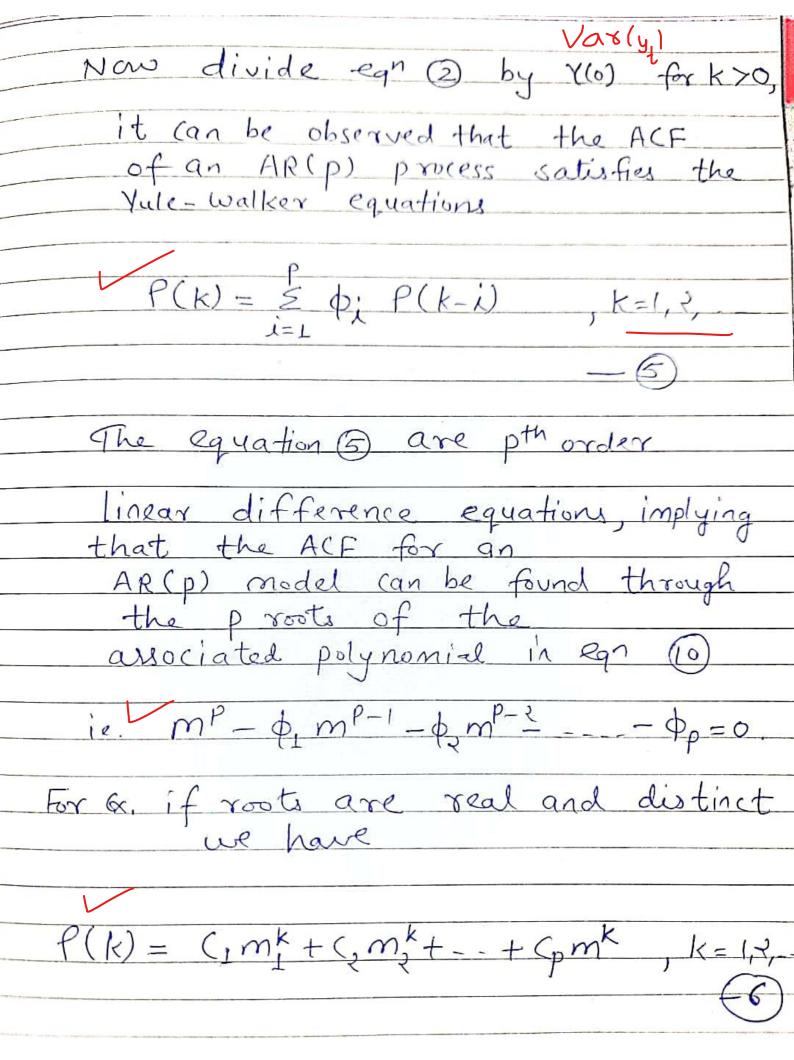
Imil, Imil, , , |mp| < 1

then we have \$\frac{2}{2} |\frac{4}{2}| < \pi.





Thus for K=0 we have Y(0) = = 0; Y(i) + 02 Afor -Y(0) - & p; Y(i) = -2



where G, Cz, -, Cp are particular constants. However, the roots may not all be distinct or real. Thus the ACF of an AR(p) process Can be a mixture of exponential decay and damped Sinusoid expressions depending on the roots of eqn (10)