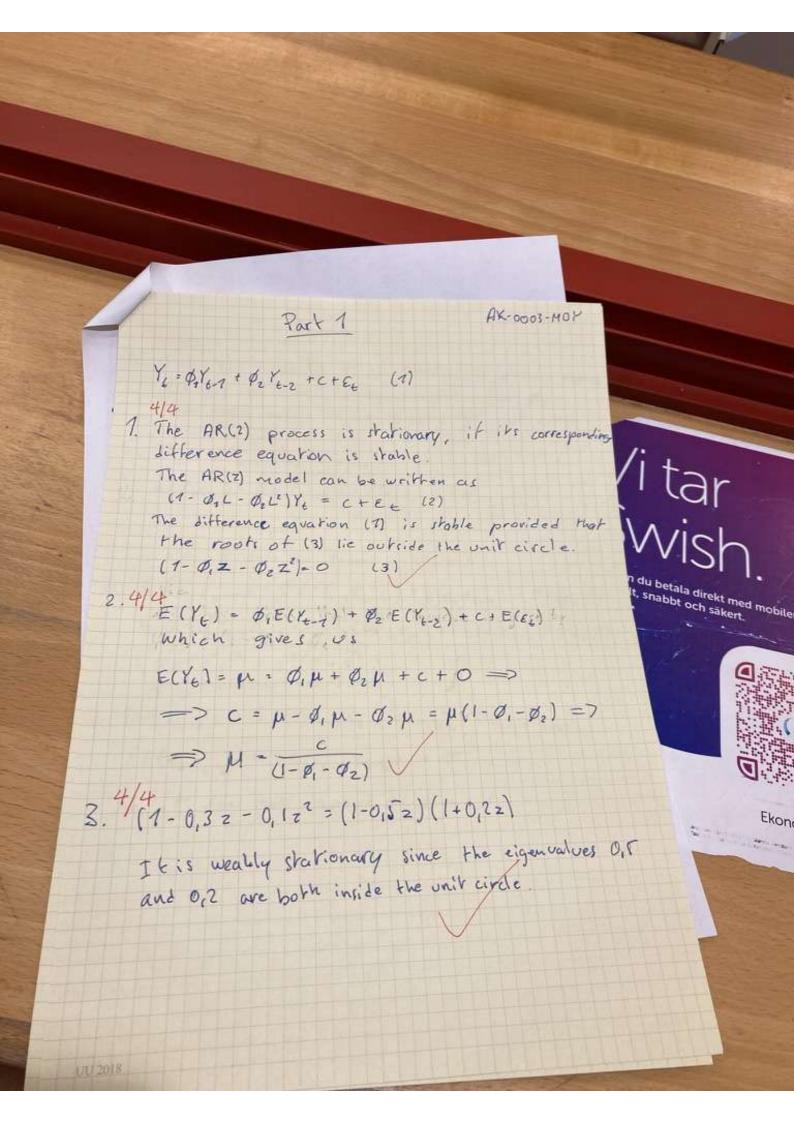
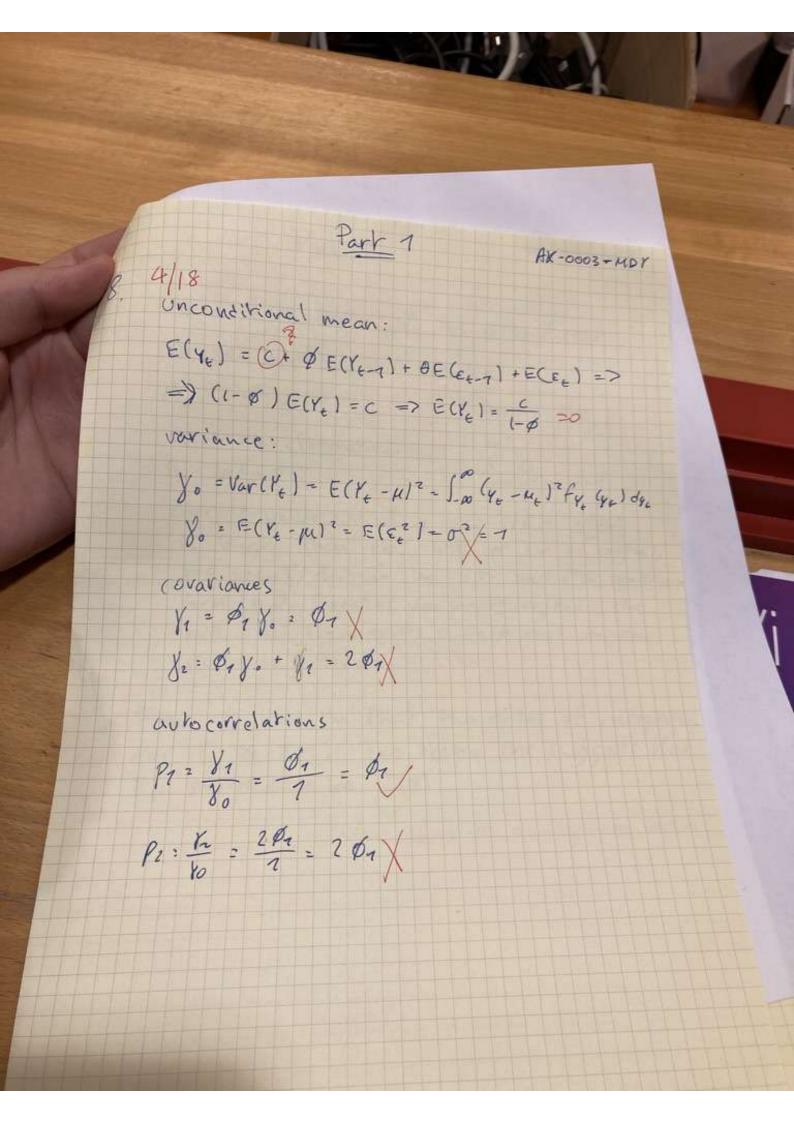
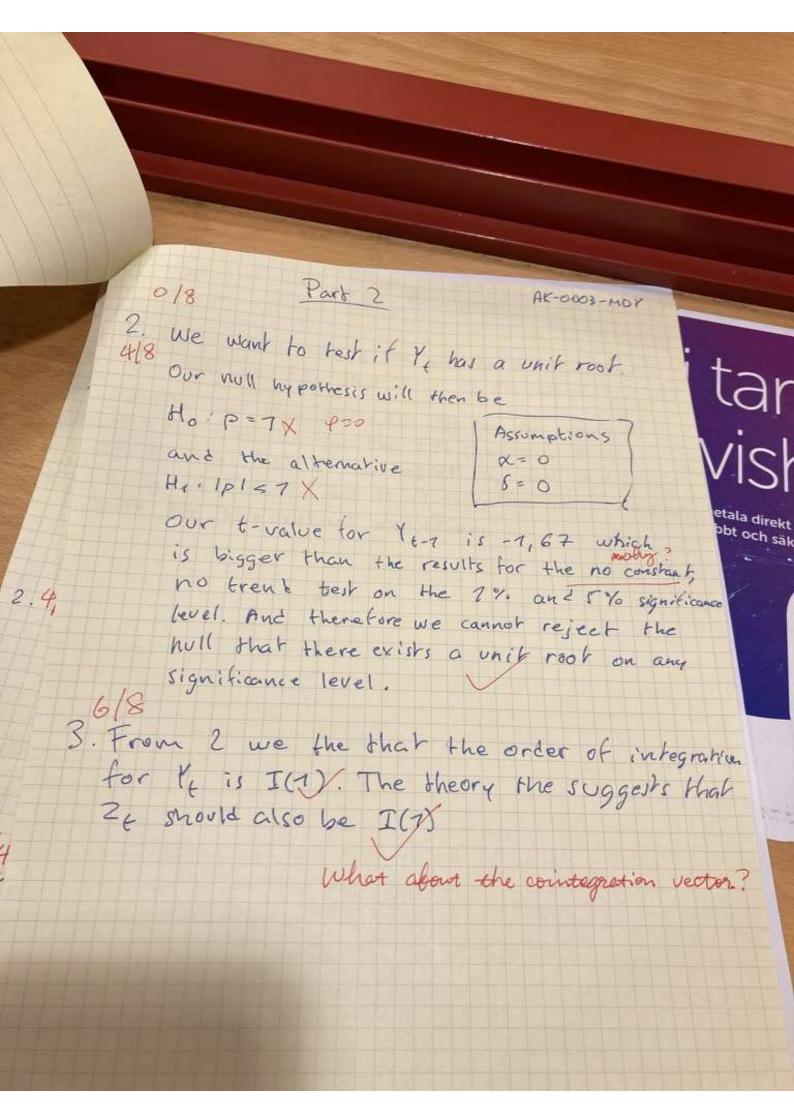
AK-0003-MOY Part 1 Y = \$1/67 + \$2 Y 6-2 + C+ Et (1) 4/4 1. The AR(2) process is stationary, it its corresponding difference equation is stable The AR(z) model can be written as (1- O,L- O,L) Ye = C+EE (2) The difference equation (7) is stable provided that the roots of (3) lie outside the unit circle. (1- 0, Z - 0, Z) = 0 (3) 2.4/4 E(Yt) = \$ (Kt-1) + \$ E(Yt-2) + C + E(E) which gives , Us E(YE) = pr = \$ p1 + \$ p1 + c + 0 => => c = \under - \pi, \under - \pi\_2 \under = \under (1 - \pi, - \pi\_2) => => M = (1-0,-02) 3. 4/4(1-0,32-0,12<sup>2</sup>=(1-0,52)(1+0,22) It is weally stationary since the eigenvalues O.T and 0,2 are both inside the unit circle



Part 1 4. 4/4
The stationarity of an ARMA (1,7) process depine entirely on the Autoregressive parameter of 5.6/9 = dY = + E + O E = -1  $E(Y_{t}e_{t}) = \emptyset E(Y_{t-1}e_{t}) + E(e_{t}e_{t}) + \Theta E(e_{t-1}e_{t}) =$ tar a 0 + 0 + 0 6.  $I=(Y_t E_{t-1})=0E(Y_{t-1}E_{t-1})+E(E_t E_{t-1})+\ThetaE(E_{t-1})=\frac{1}{snabbt och säkert.}$ = Ø E (Y+2E6-1+E6-12+BE6-26-1) + E(E6E6-1)+B(E6-1)= = \$\psi^2 + \psi^2 = \psi^2(\psi + 1) \\
\text{Yes, it depends on time to 7. E(Yte+4) = Ø E(Y+4-1 E+4+ E+4) + OE+-12+4) + + E (CLE6-4) + O E (E4-1 E6-4) = 0 No, it does not depend on hime t. 2/6





Part 2 AK-0003-MDY 4/8 4. Well it we take alook at the t-value for XE-7 we can see that it is -2,54 which is advally less than the -1,95 for the no constant no frond ADF test on the 5% significance level Which means that we can reject the null that there is a unit root. And it is therefore in accordance 00 with the theoretical prediction 6/16