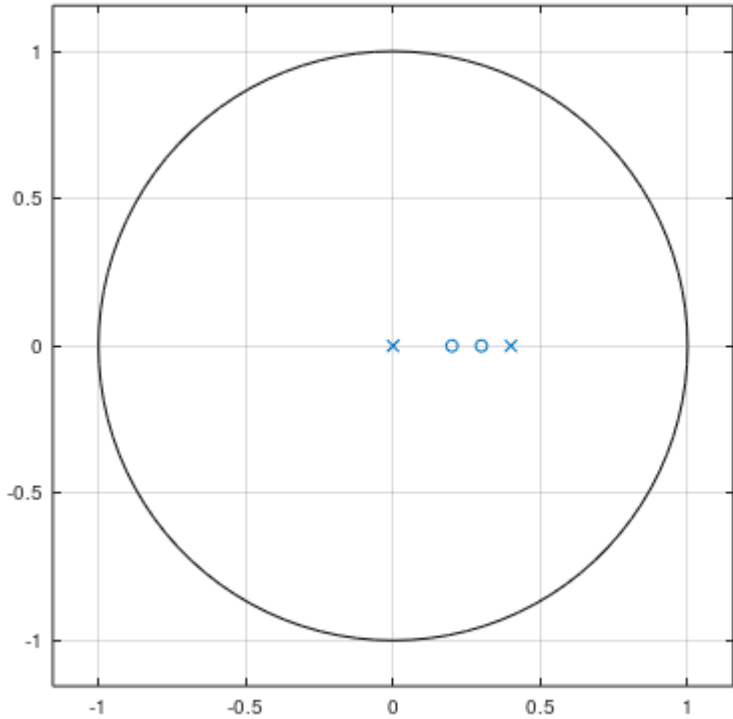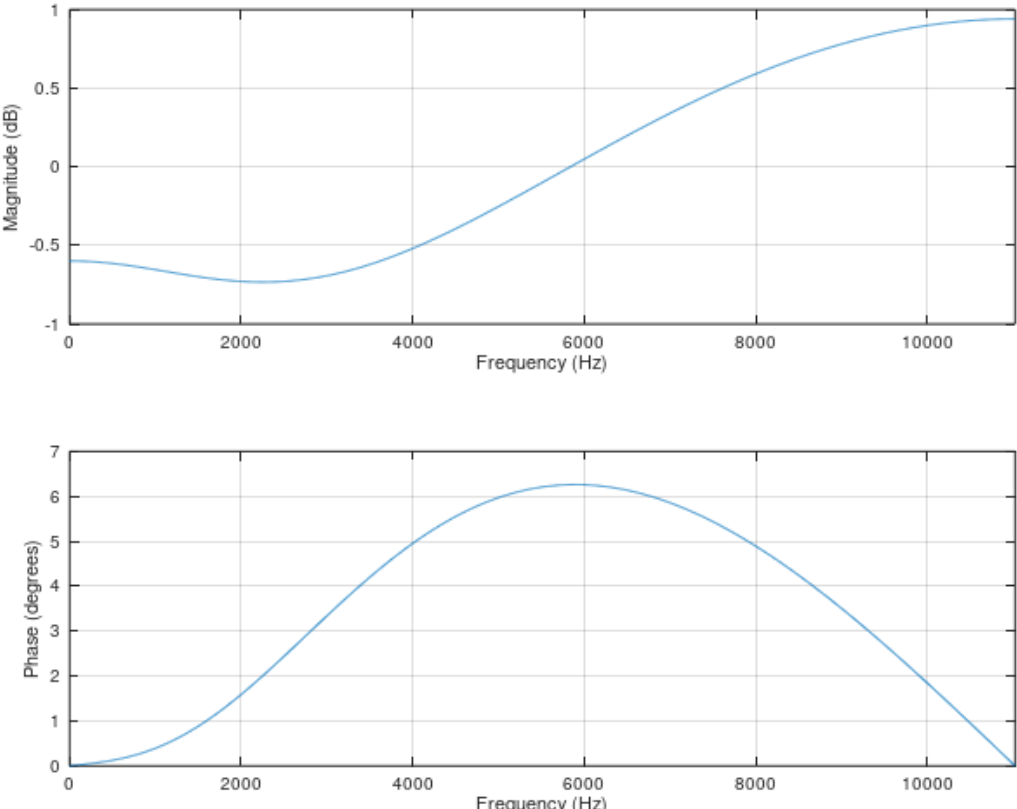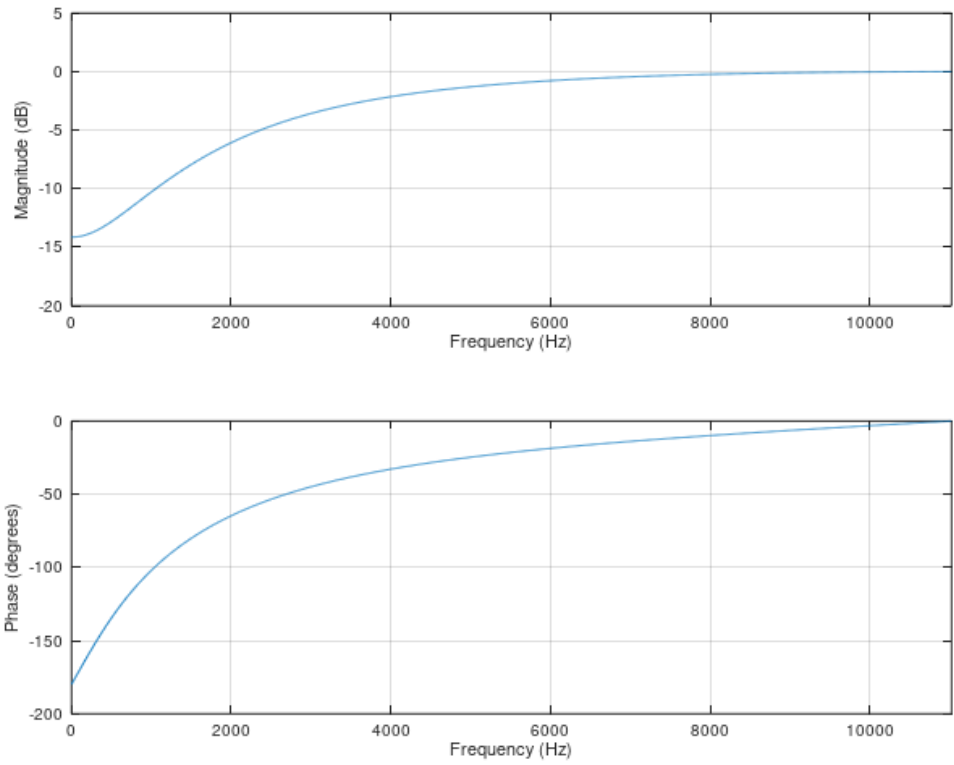# TX00CQ31 – Digital Signal Processing

Study 4: Poles and Zeros	Name(s): Arsi Arola	ID(s): 1706768	Deadline: Exercise 5

Read these instructions first!

Number	Write your answer in this column	Questio
Q1	Write commands here ! Y = [1, -0.4]; X = [1, -0.5, 0.06];	System y[n 0,06x[n Describ can use
Q2	zplane(X, Y); Insert your picture here! Is the system stable ?	Draw A determi
Q3	Write commands here ! roots(X) roots(Y)	Calcula

Q4	 freqz(X,Y) Fs = 22050 freqz(X, Y, 1024, Fs) 	Genera rate of
Q5	IIR/FIR, why ?	Determ testing
Q6	Zeros are… pi/4 7/4pi Poles are… 3pi/4 5/4pi and that can be verified from this picture…	A secor zero-po 7 π Determ

Q7	Write commands here! zz = [pi/4, 7/(4*pi)] pp = [3*pi/4, 5/(4*pi)] X = poly(zz) Y = poly(pp)	Determ parame
Q8	Insert your picture here! Fs = 22050 gg = max(abs(freqz(X, Y,1024,Fs))) bbns = X / gg freqz(bbns, Y,1024,Fs) 	Determ system Genera
Q9	Write your answer here!	Just for with the change rate (80