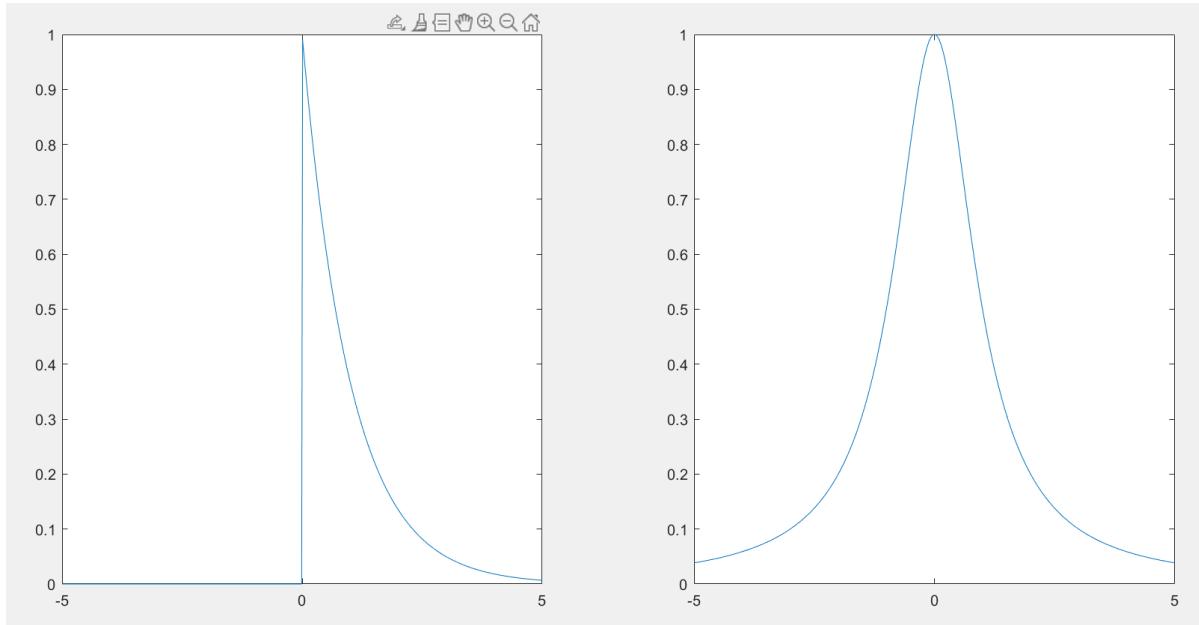


Graphical Output

CONTINUOUS TIME FOURIER TRANSFORM OF ONES-SIDED EXPONENTIAL SIGNAL

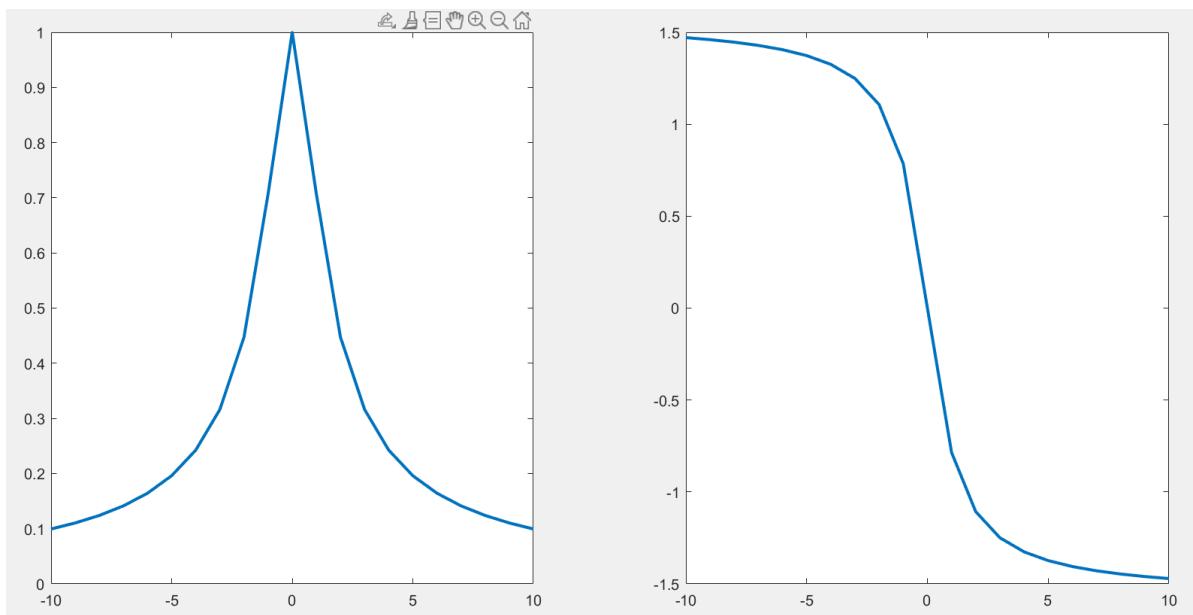
Q2)

e^{-at} and Fourier(e^{-at})



Q4)

Magnitude and Phase

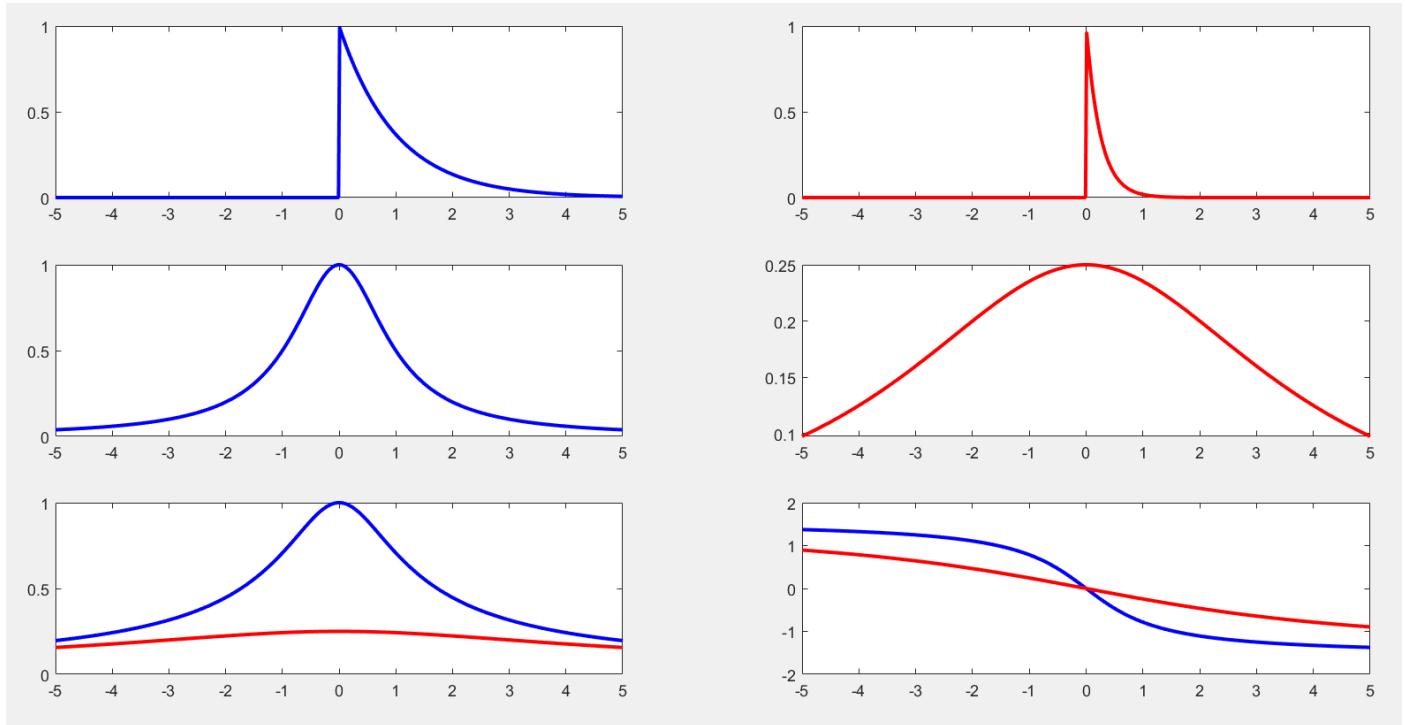


Q5)

a=1

and

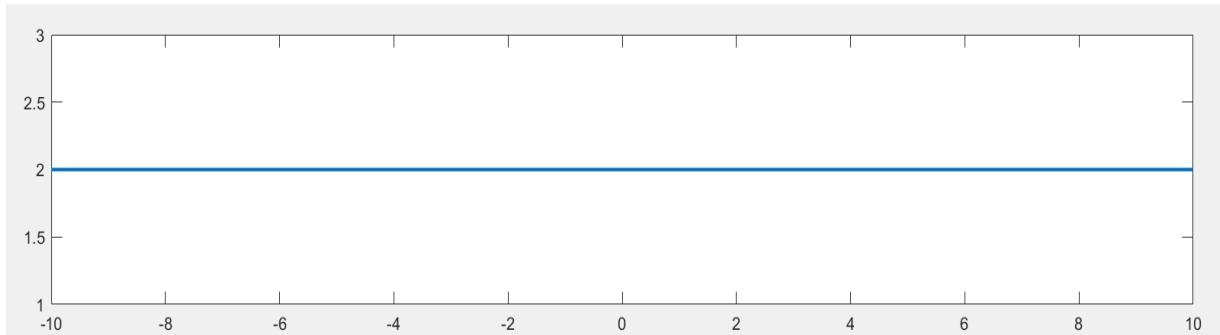
b=4



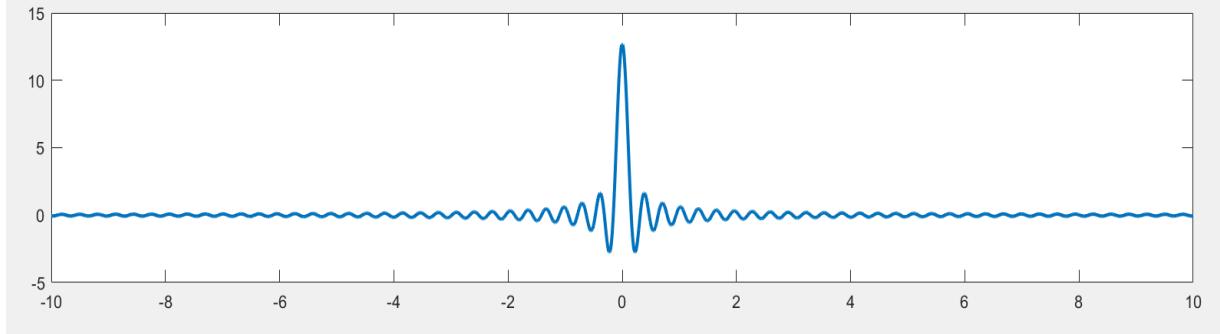
UNDERSTANDING AN IDEAL LOW-PASS FILTER

Q1)

LPF



$l_{pf}(t)$



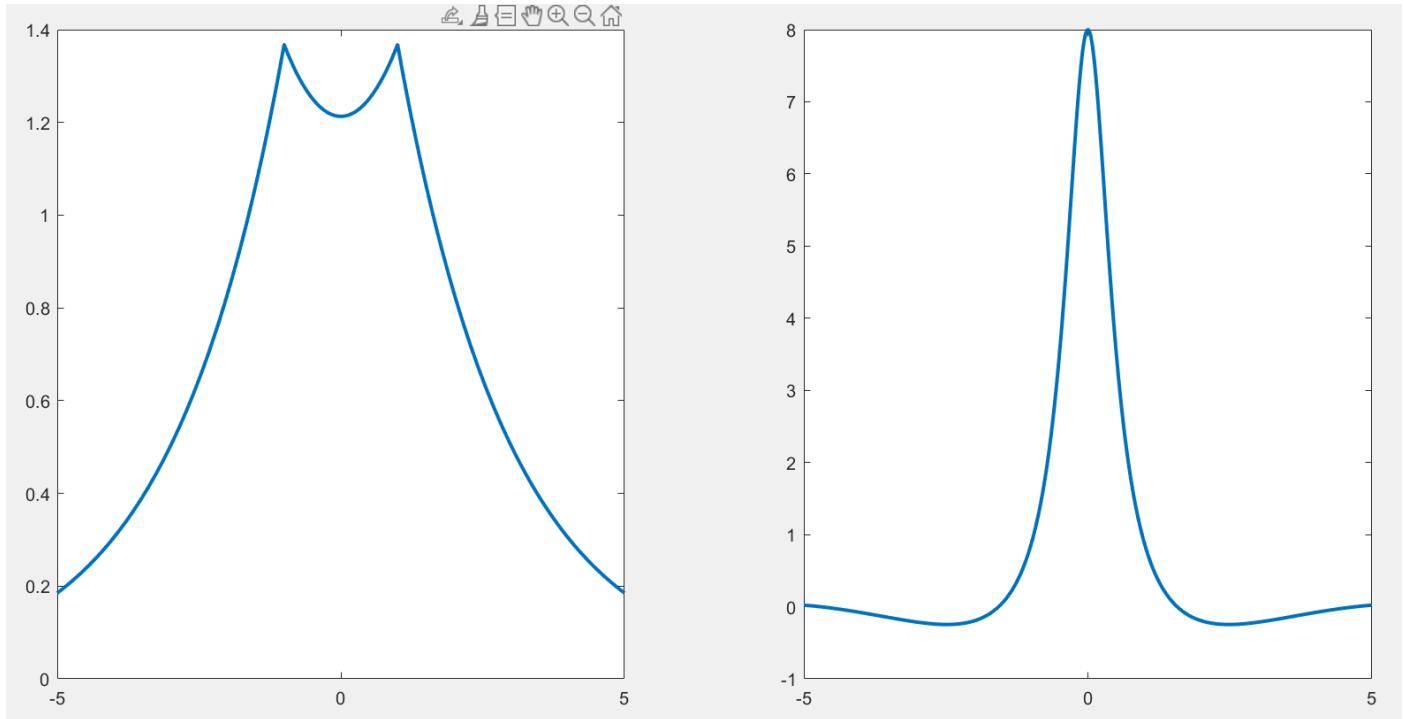
AMPLITUDE MODULATION

Q1)

$m(t)$

and

$M(jw)$

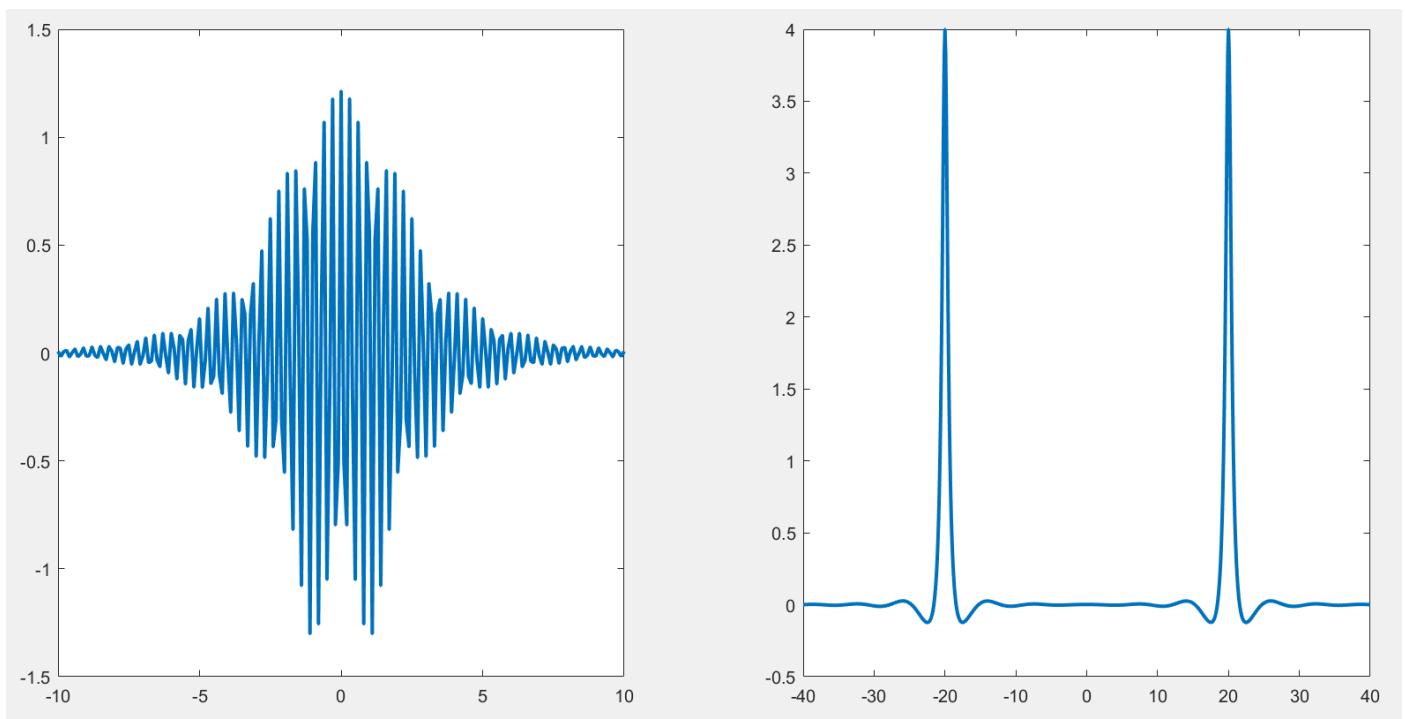


Q3)

$s(t)$

and

$S(jw)$

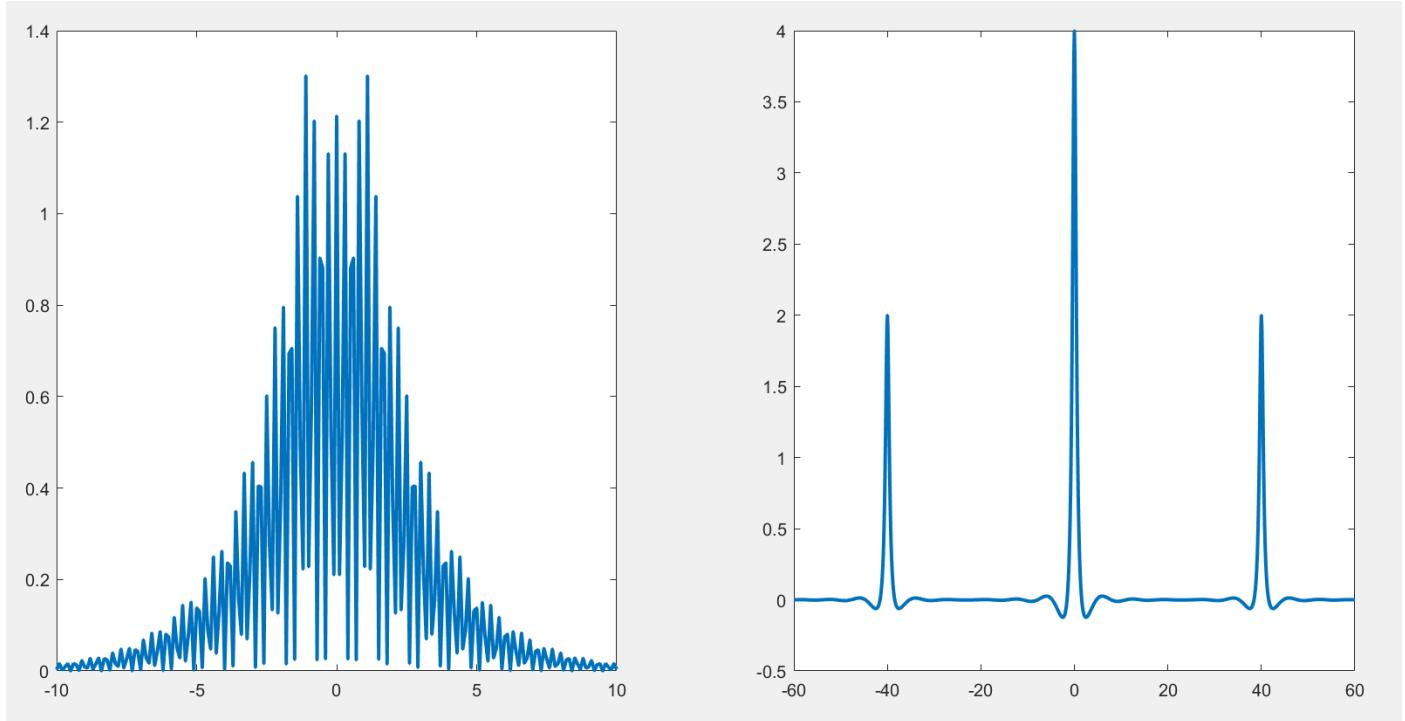


Q4)

$d(t)$

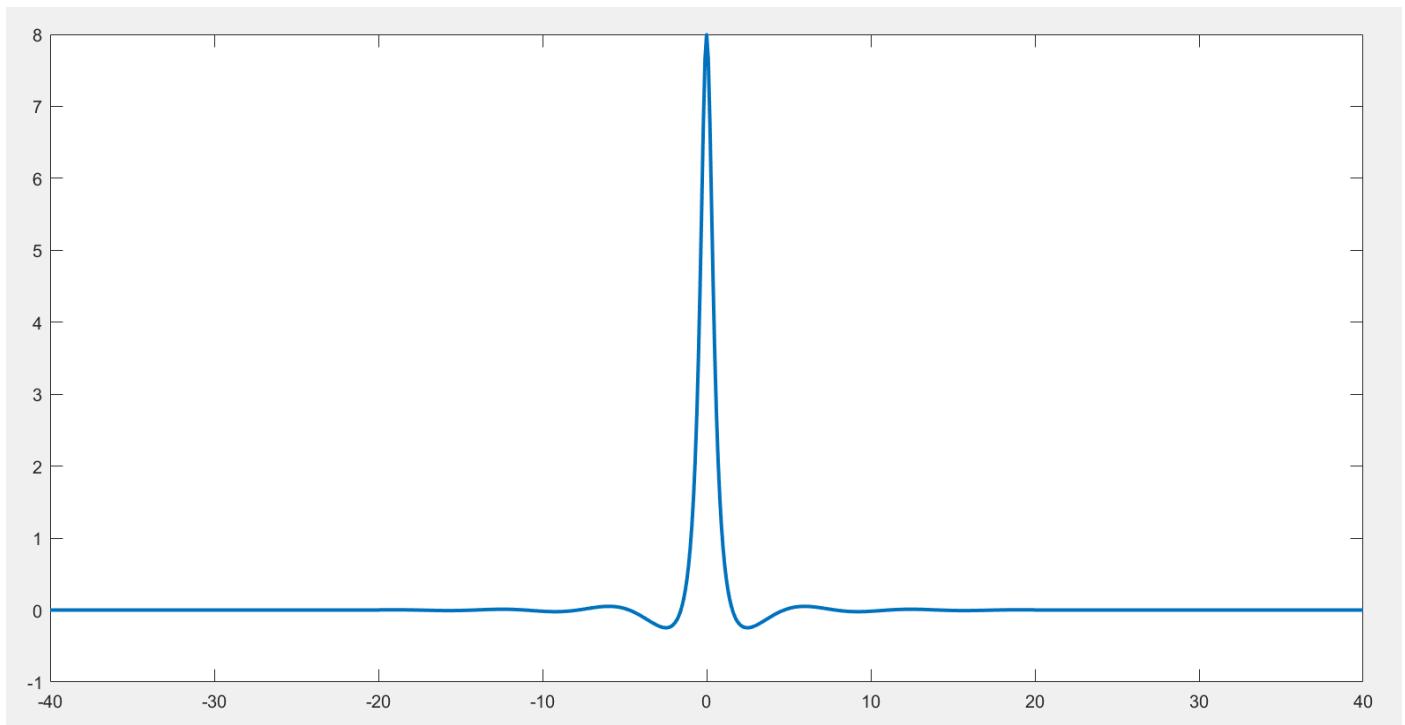
and

$D(jw)$



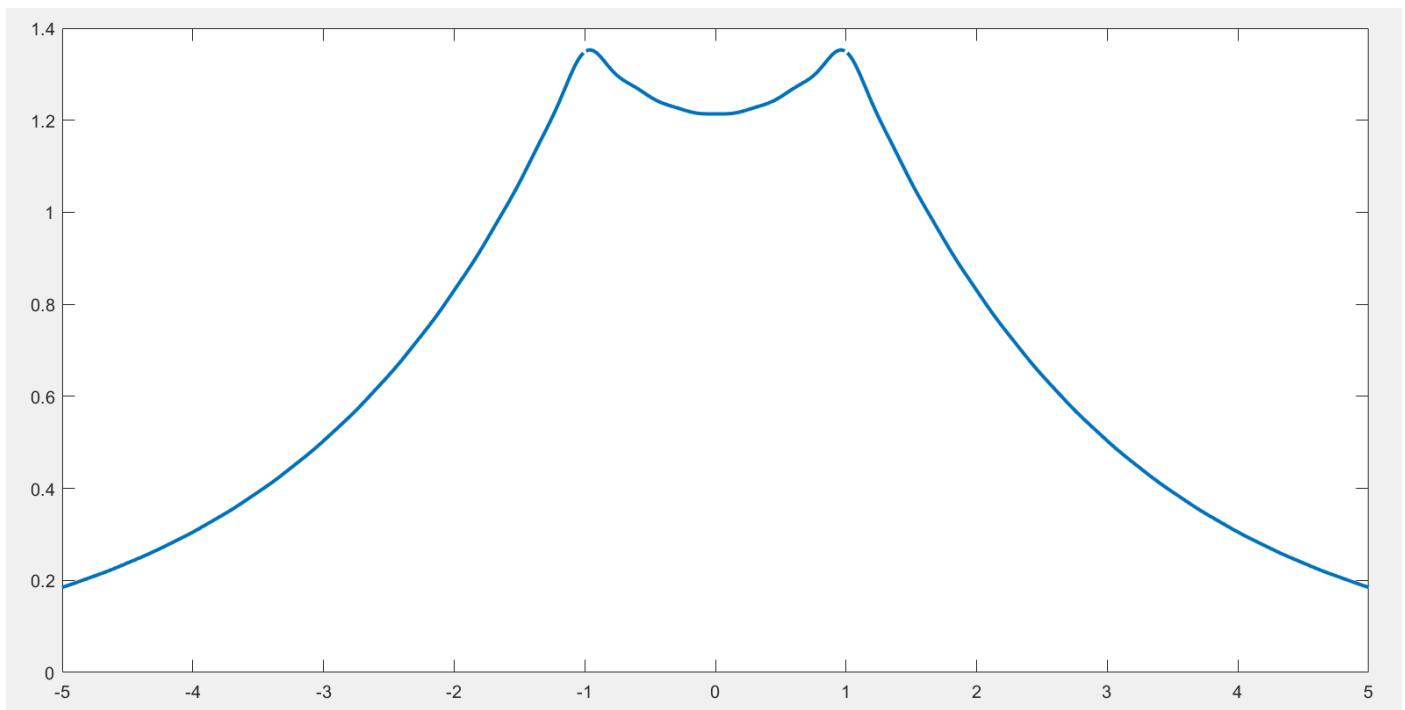
Q5)

$R(jw)$



Q6)

$r(t)$

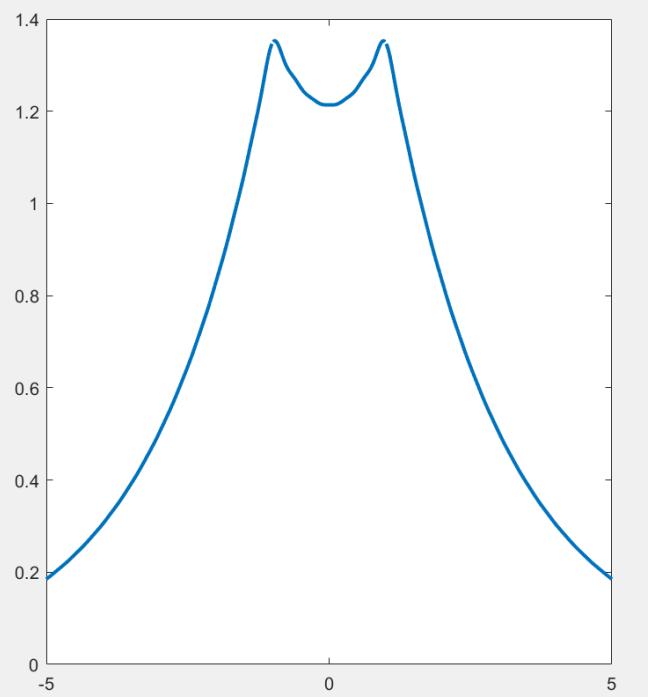
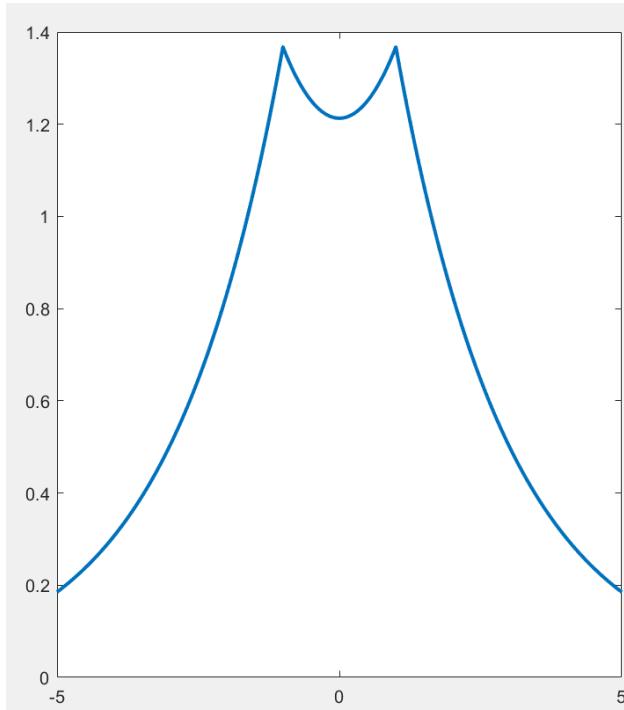


Q7)

$m(t)$

and

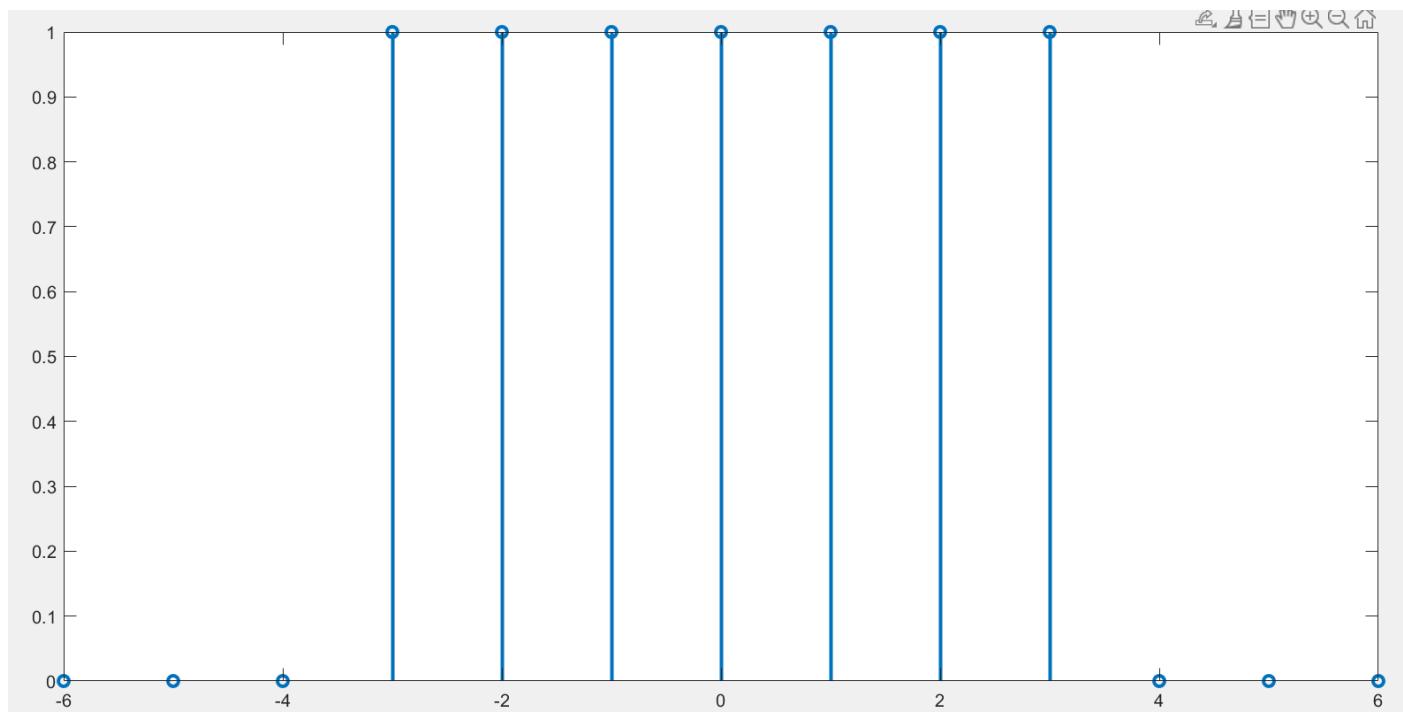
$r(t)$



DTFT OF A RECTANGULAR PULSE

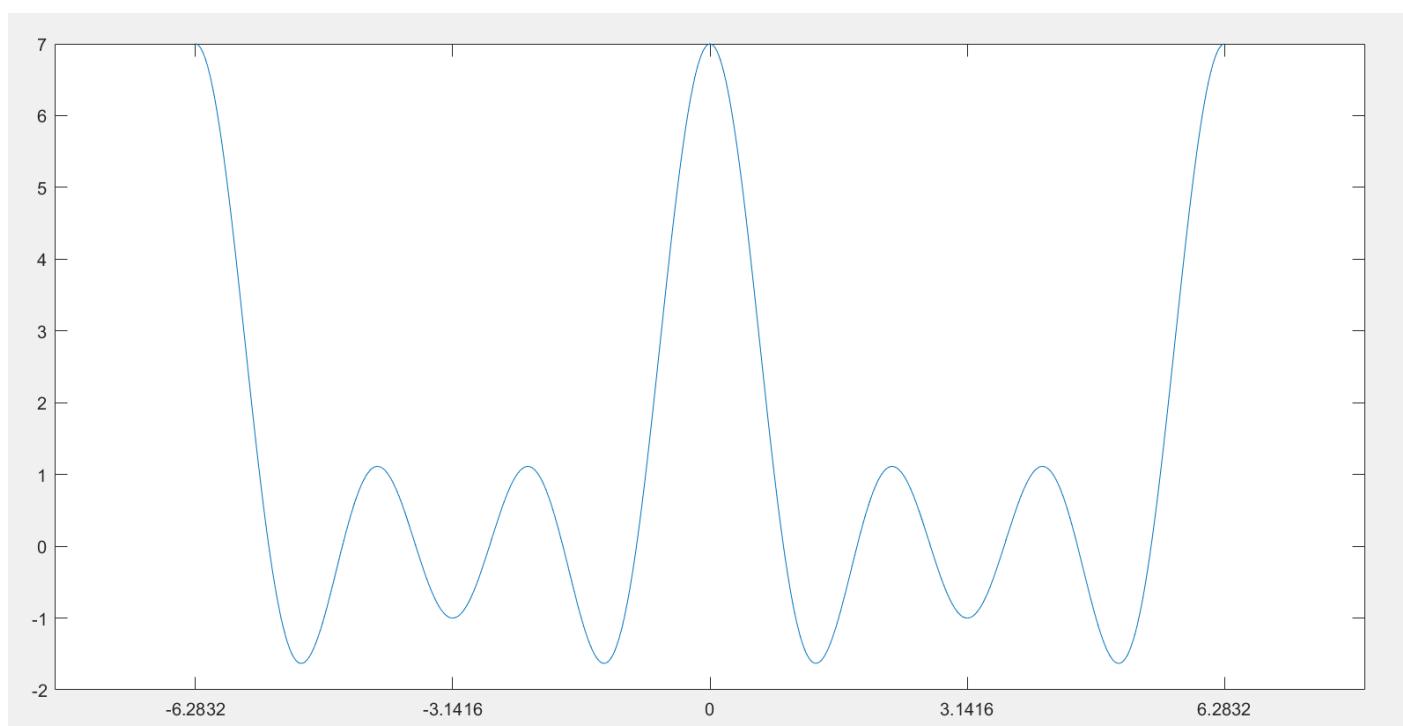
Q2)

$x(t)$



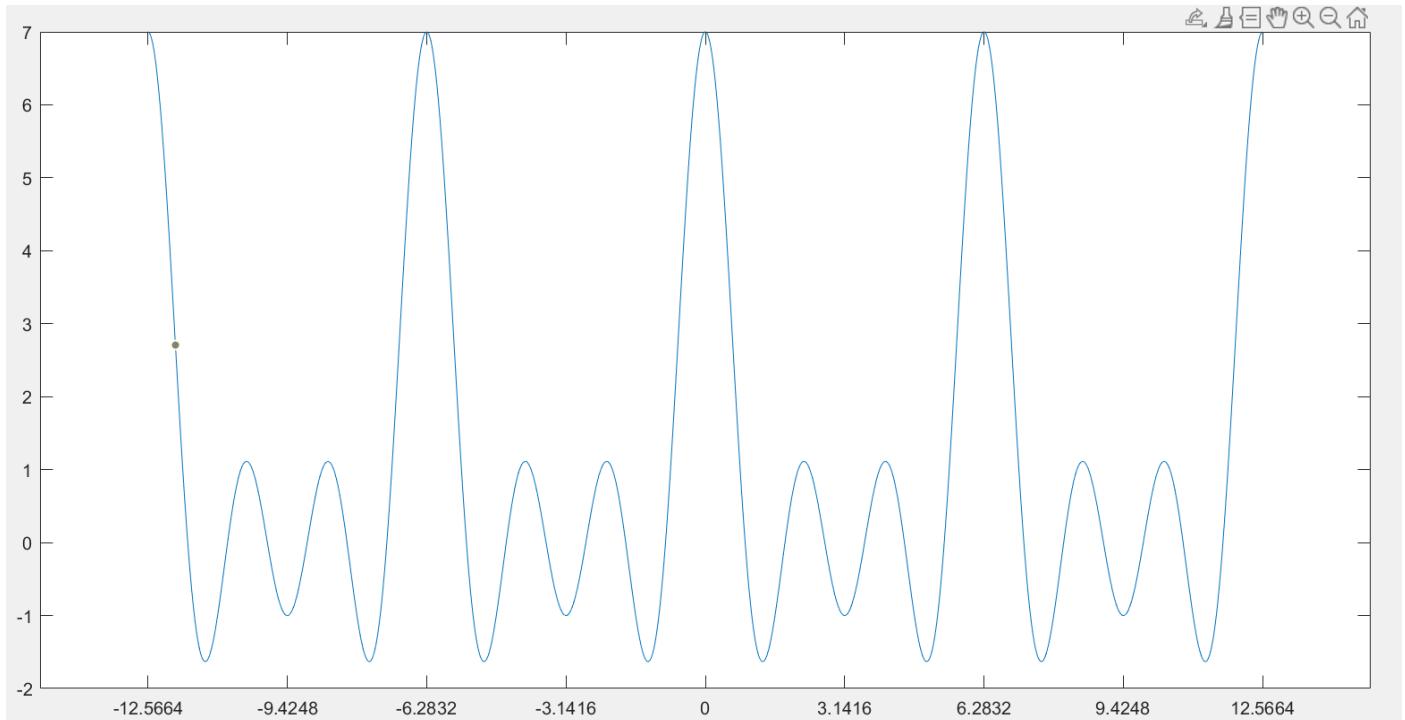
Q5)

$X(j\omega)$



Q6)

X(jw) is periodic



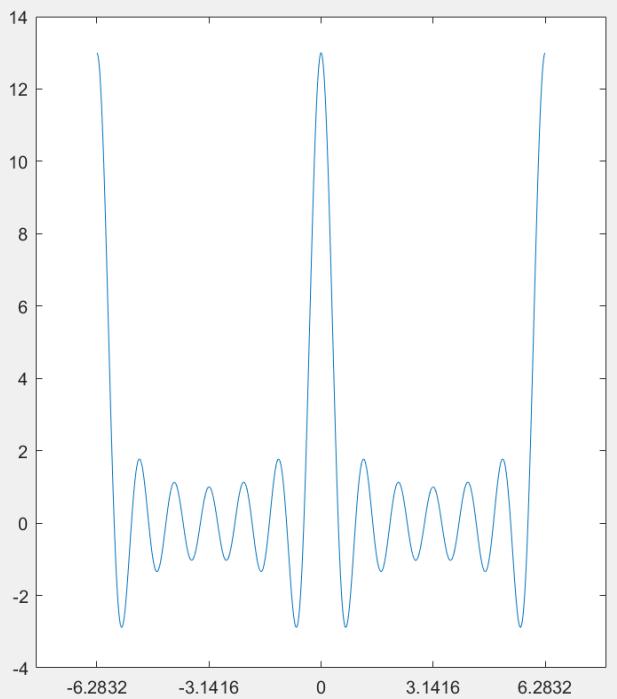
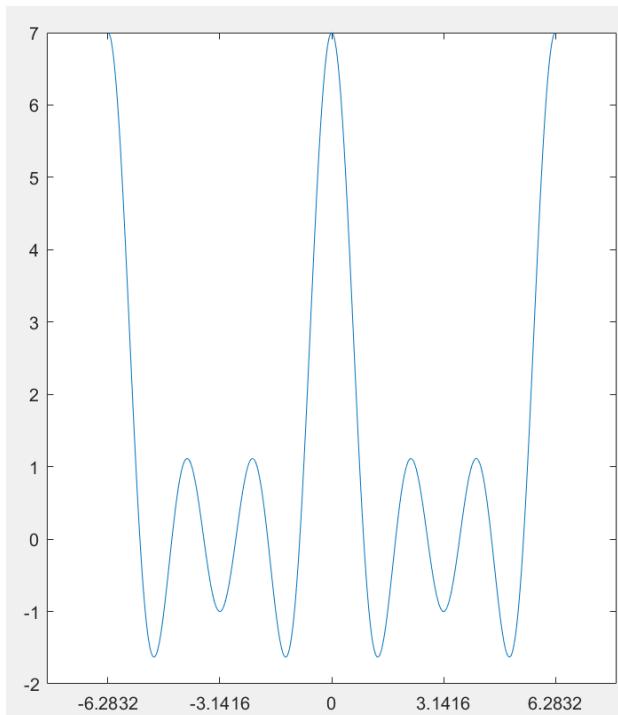
Q7)

X(jw) at

N=3

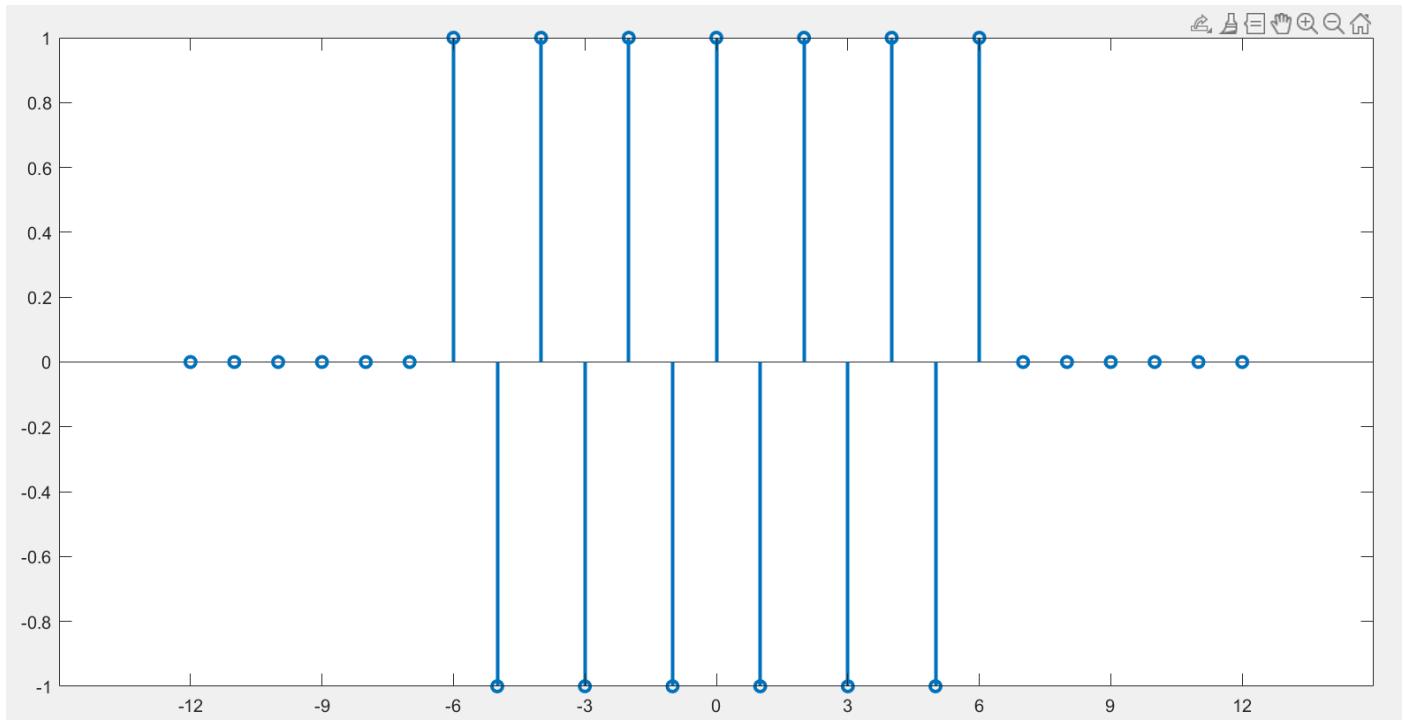
and

N=6

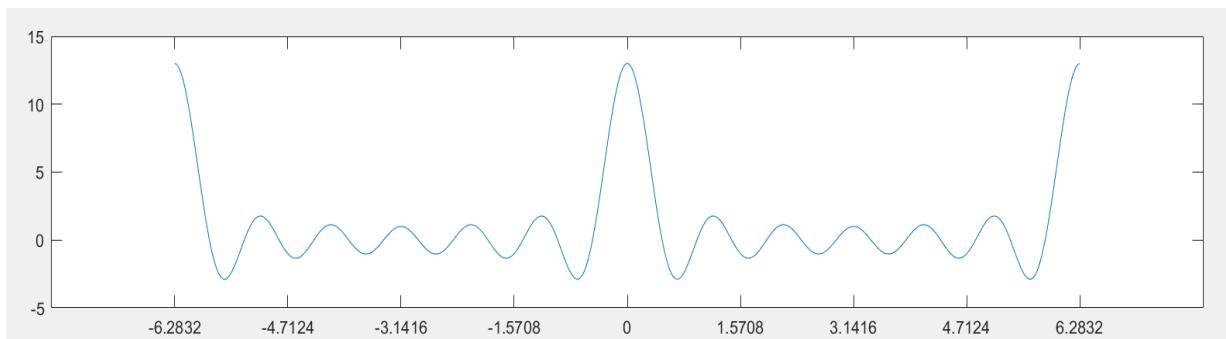


Q9)

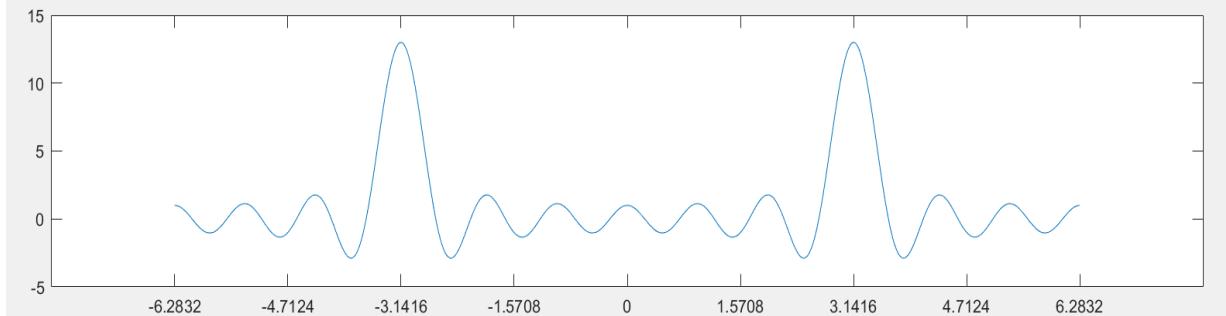
y[n], N=6



Q10,Q11)



X(jw)

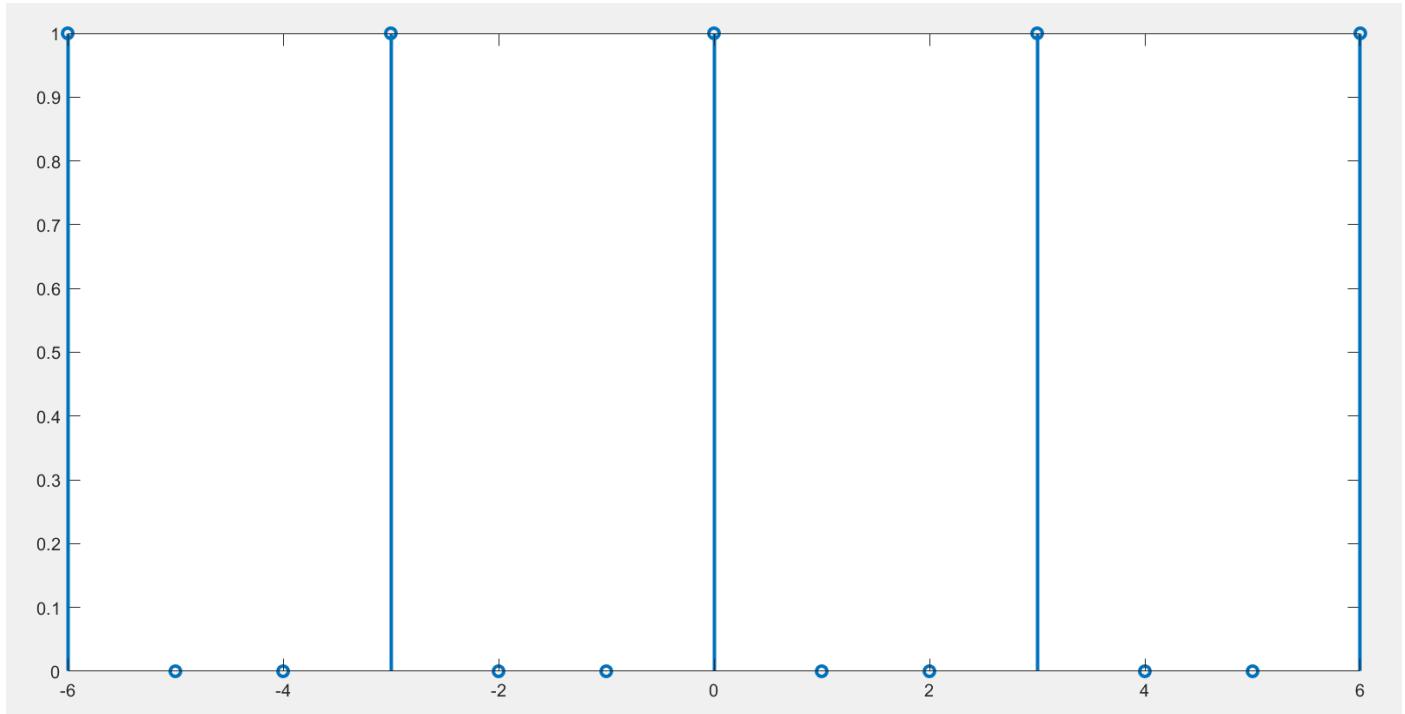


Y(jw)

TIME EXPANSION AND INVERSE DTFT

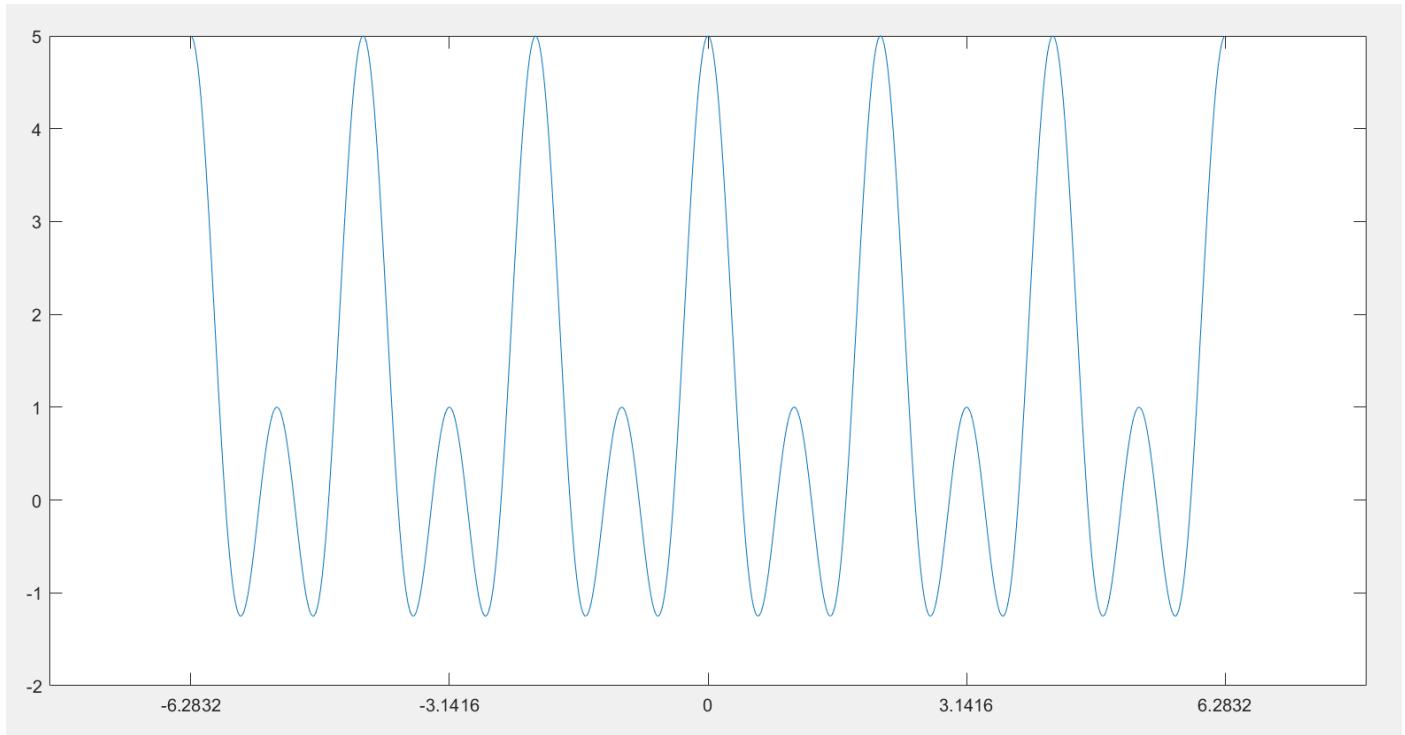
Q3)

$x_3[n]$



Q4)

$X(j3w)$



Q6)

Inverse of $X(3jw)$

