

Graphical Output

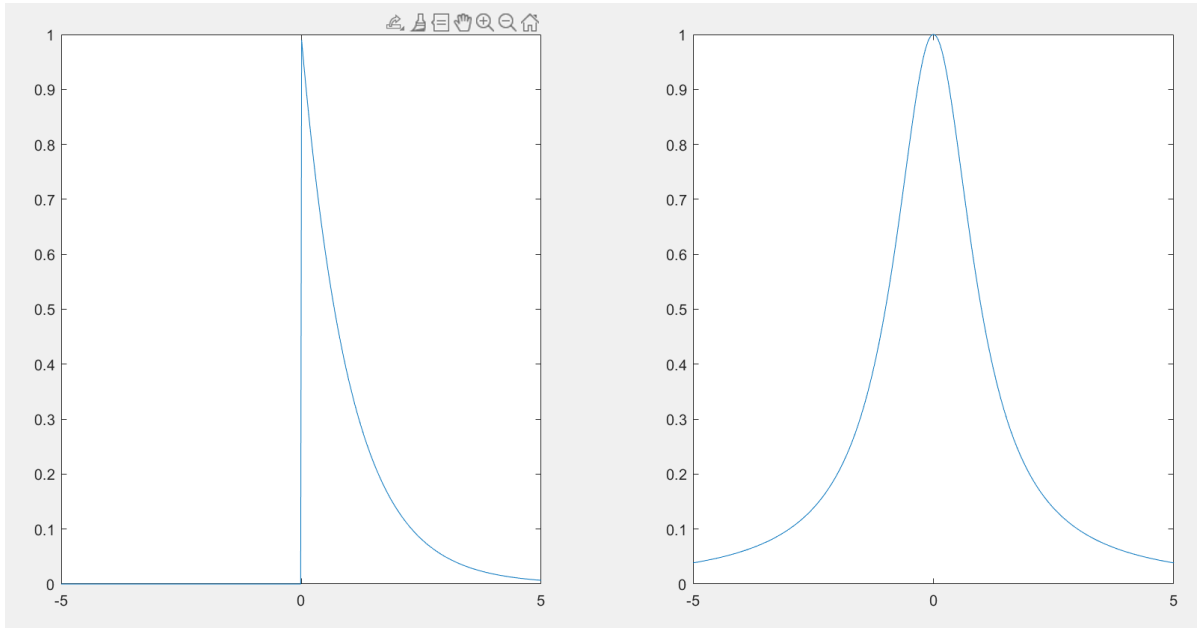
CONTINUOUS TIME FOURIER TRANSFORM OF ONES-SIDED EXPONENTIAL SIGNAL

Q2)

e^{-at}

and

Fourier(e^{-at})

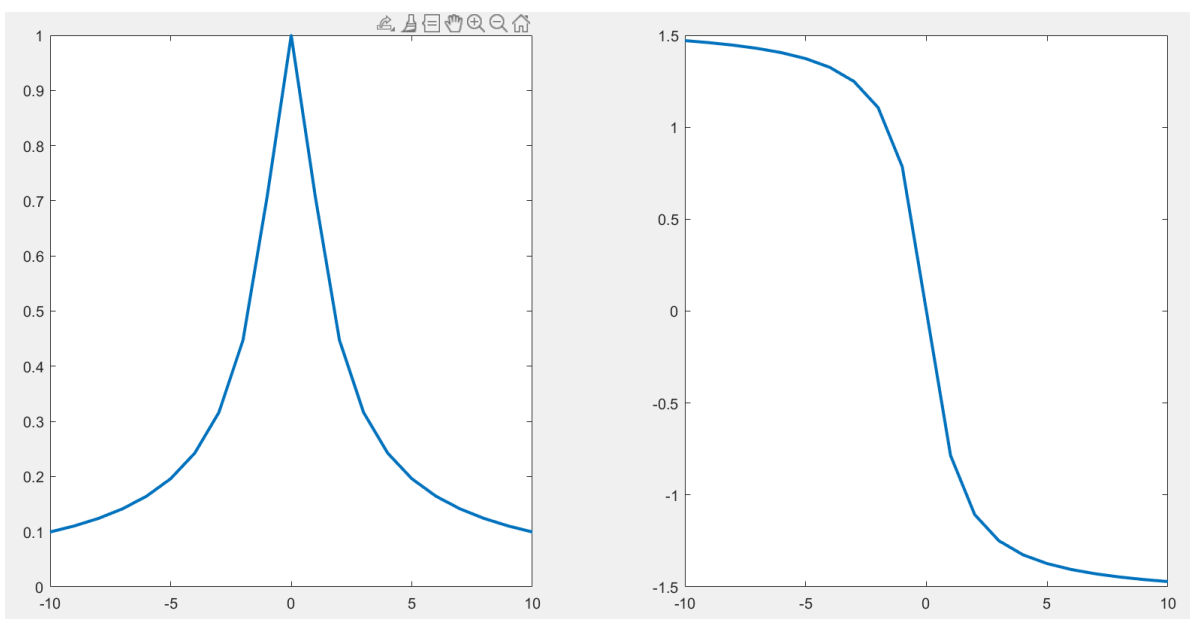


Q4)

Magnitude

and

Phase

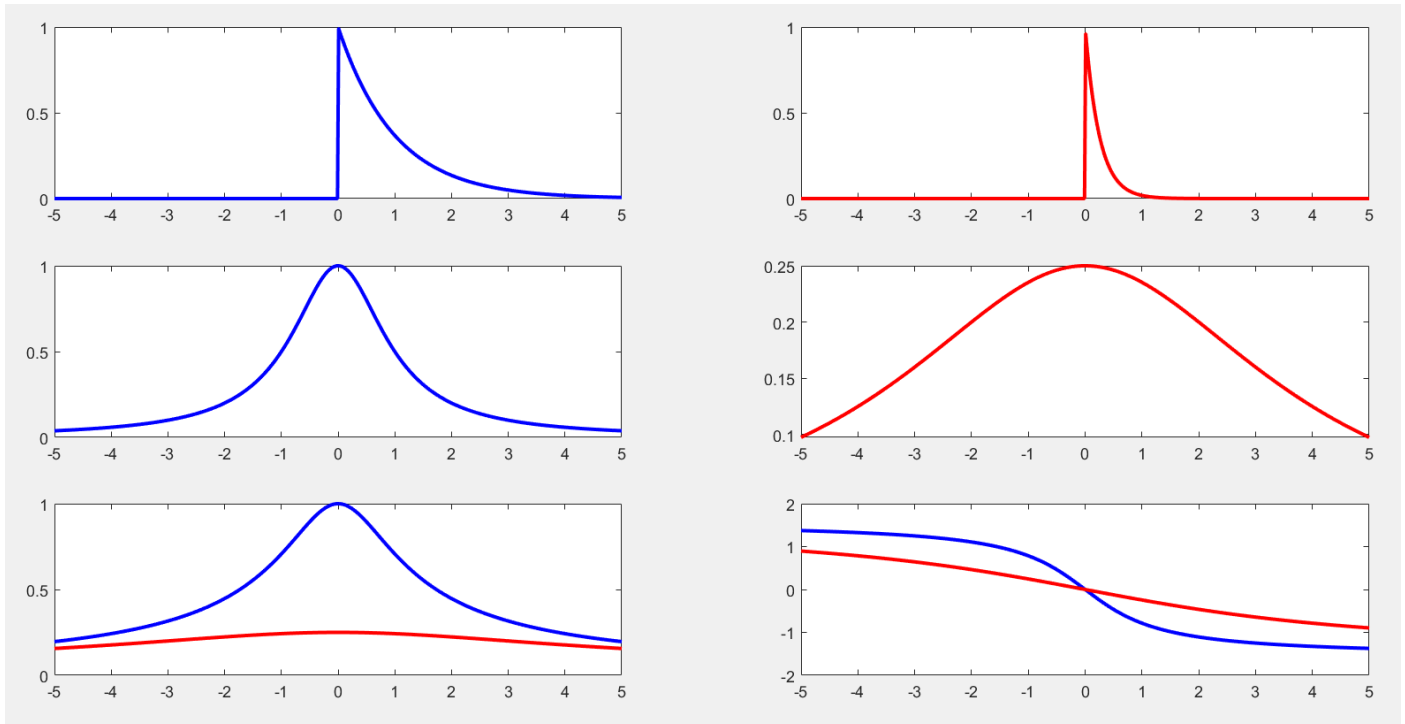


Q5)

$a=1$

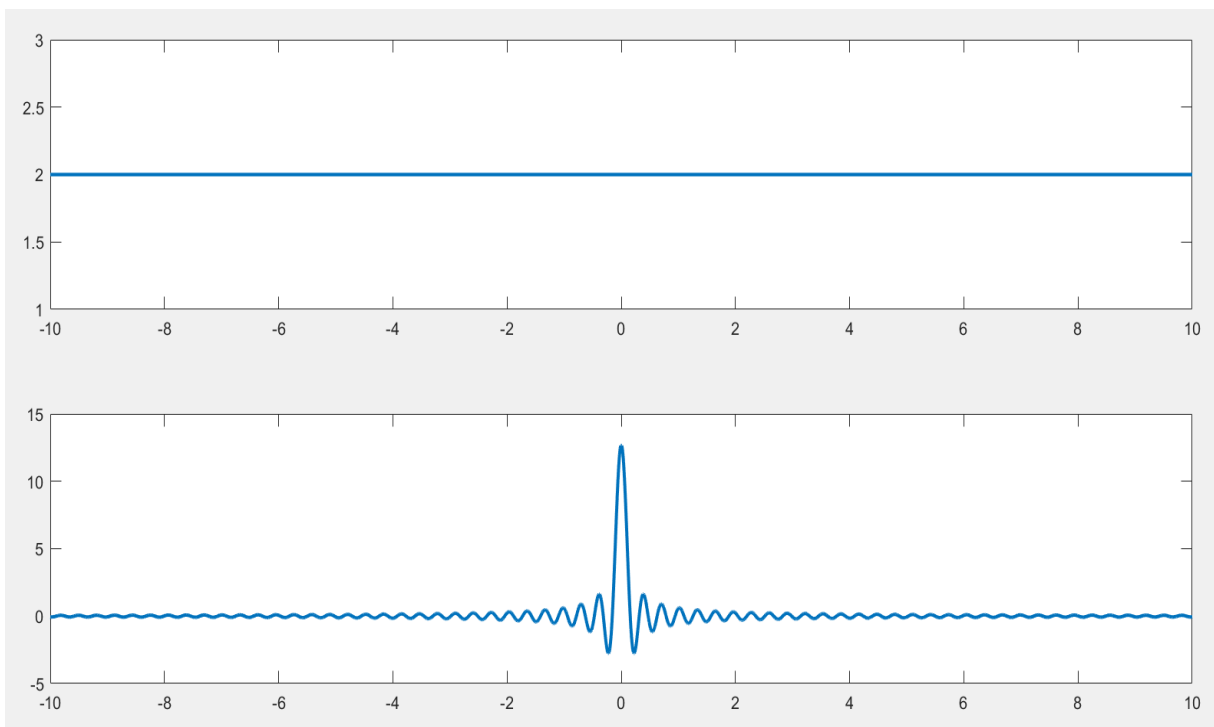
and

$b=4$



UNDERSTANDING AN IDEAL LOW-PASS FILTER

Q1)



LPF

lpf(t)

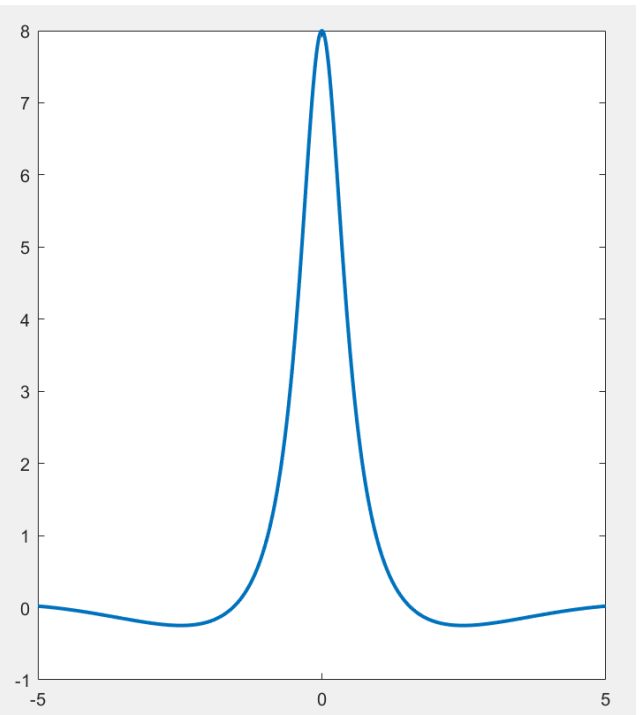
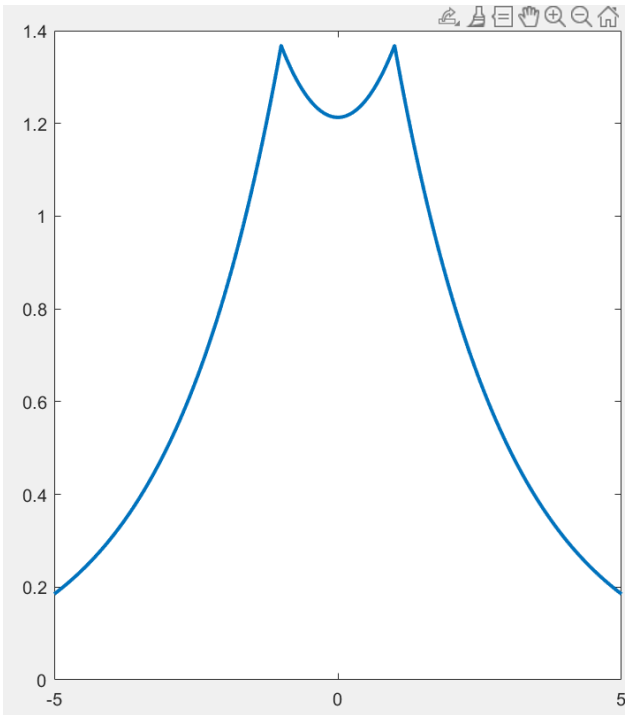
AMPLITUDE MODULATION

Q1)

$m(t)$

and

$M(j\omega)$

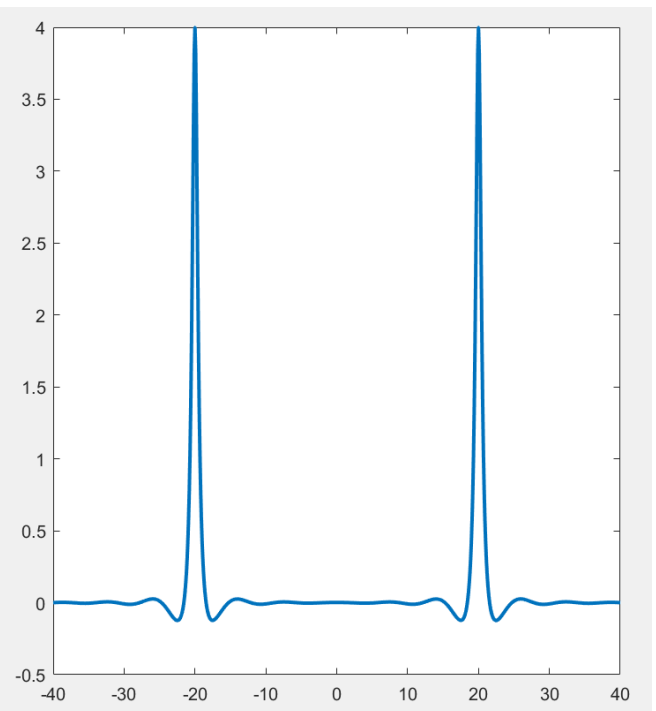
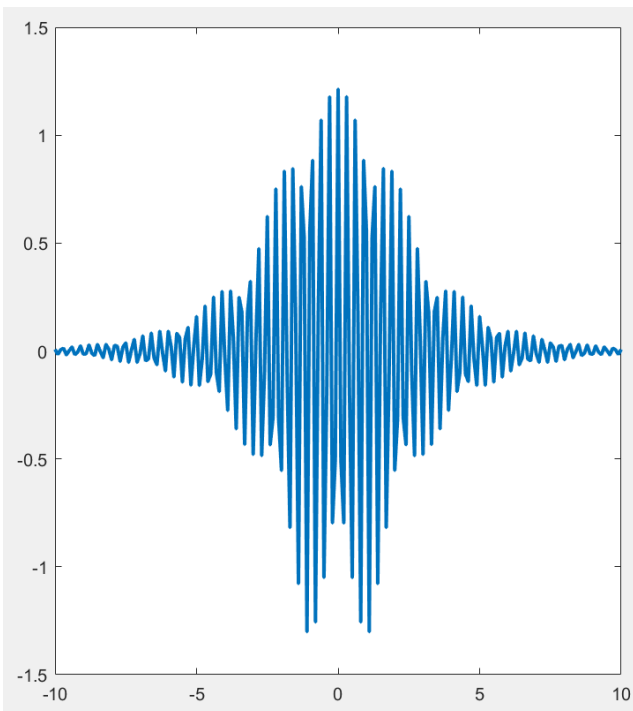


Q3)

$s(t)$

and

$S(j\omega)$

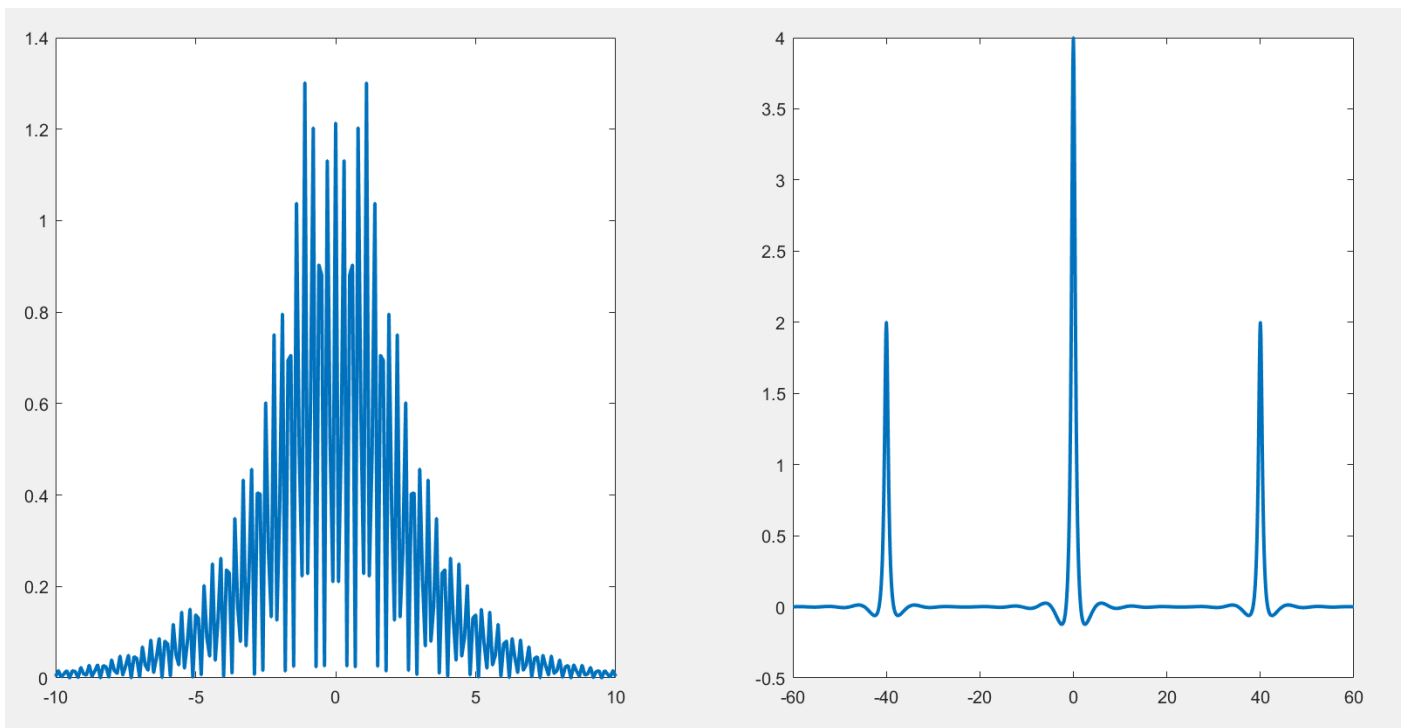


Q4)

$d(t)$

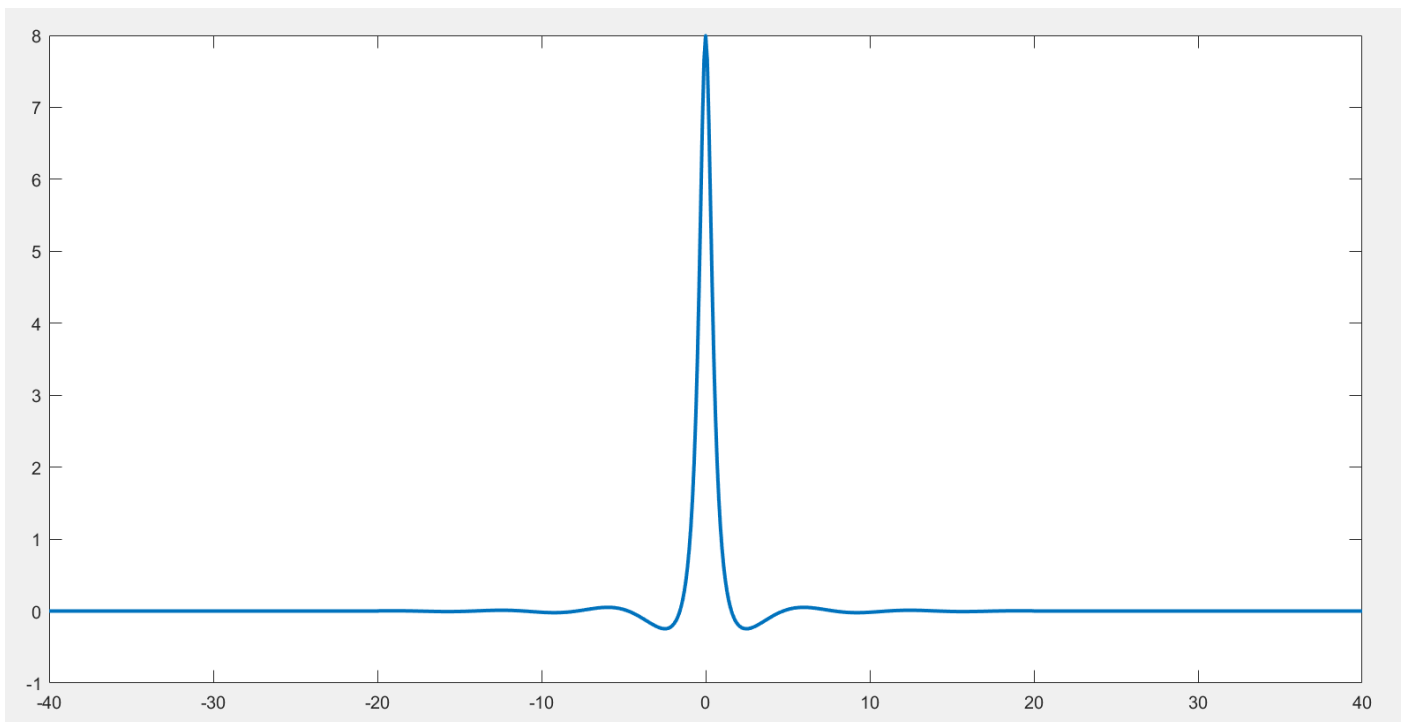
and

$D(j\omega)$



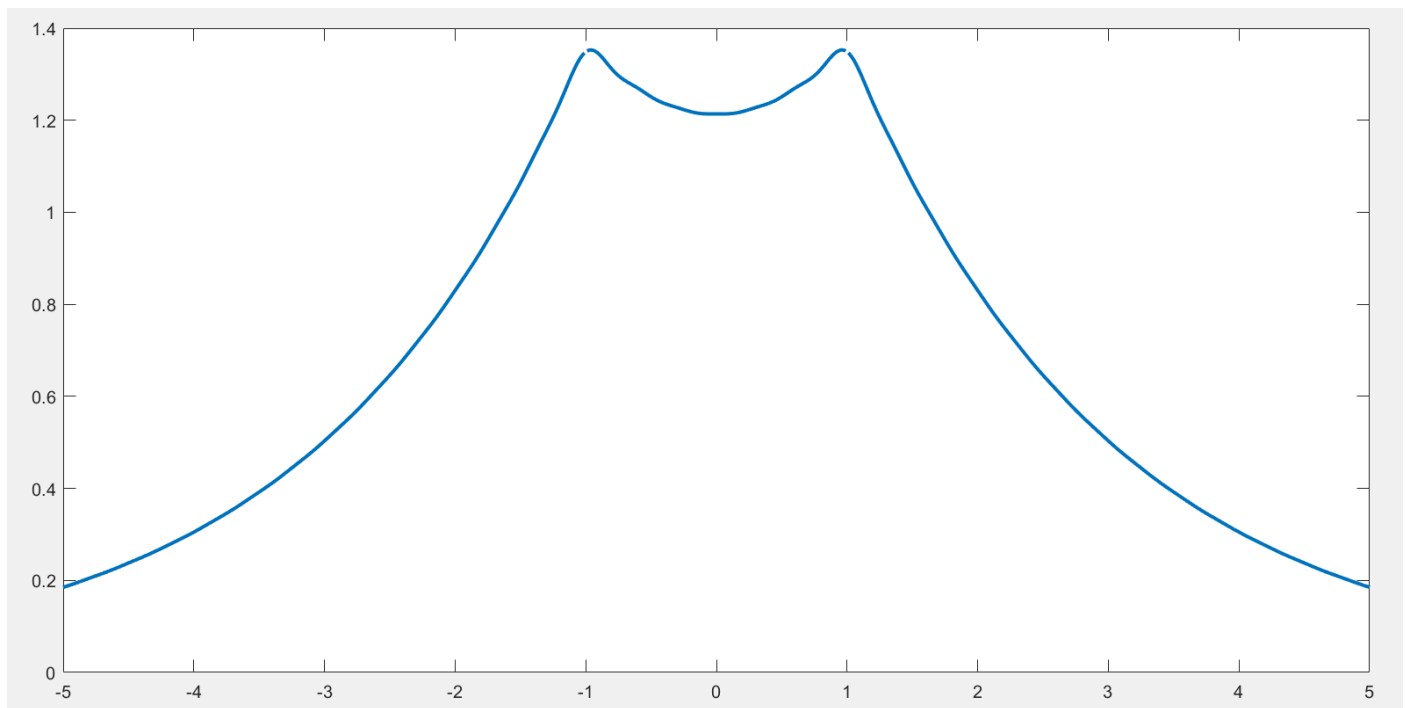
Q5)

$R(j\omega)$



Q6)

$r(t)$

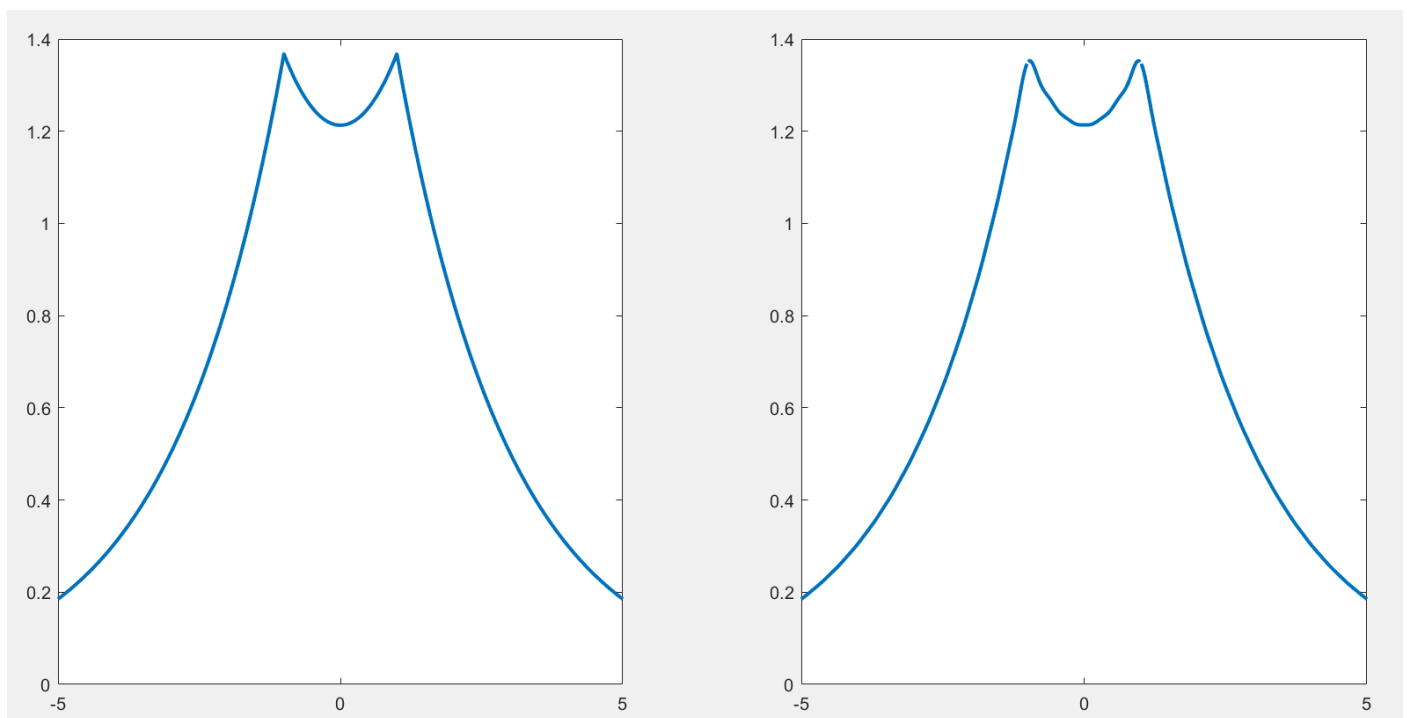


Q7)

$m(t)$

and

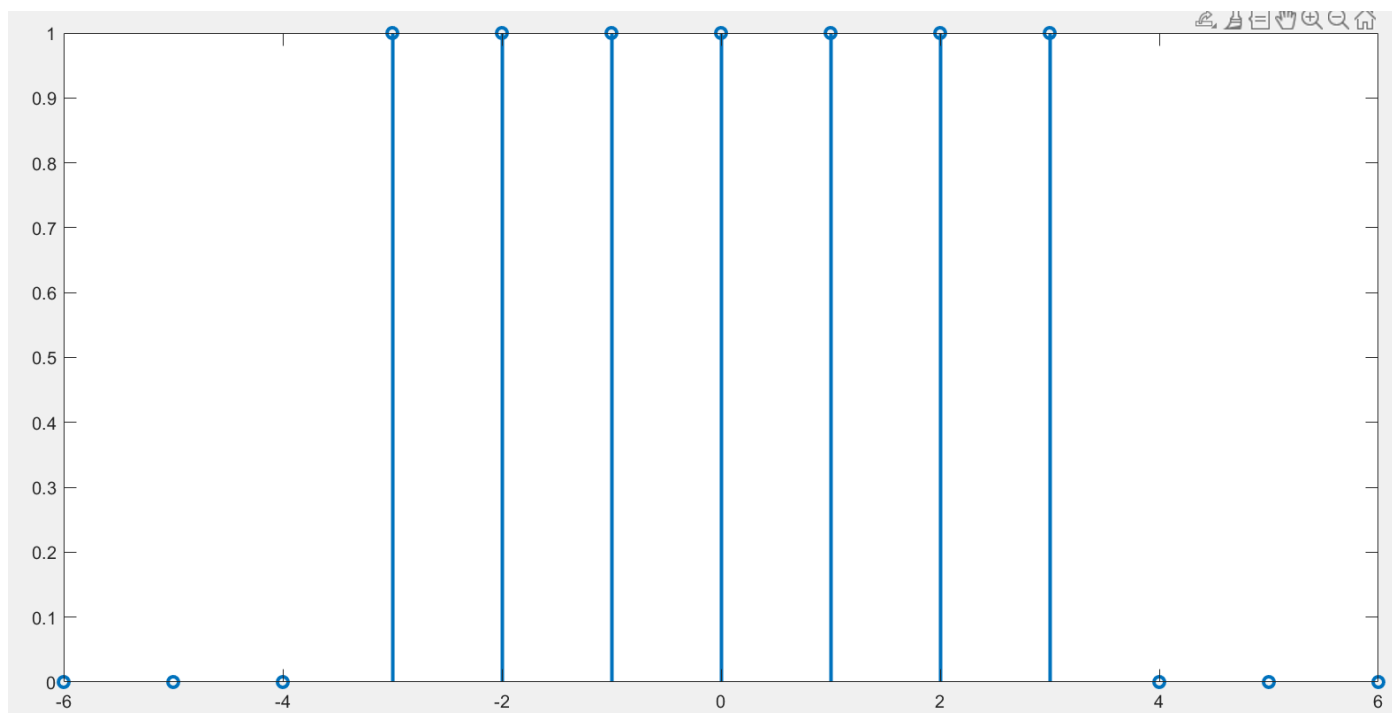
$r(t)$



DTFT OF A RECTANGULAR PULSE

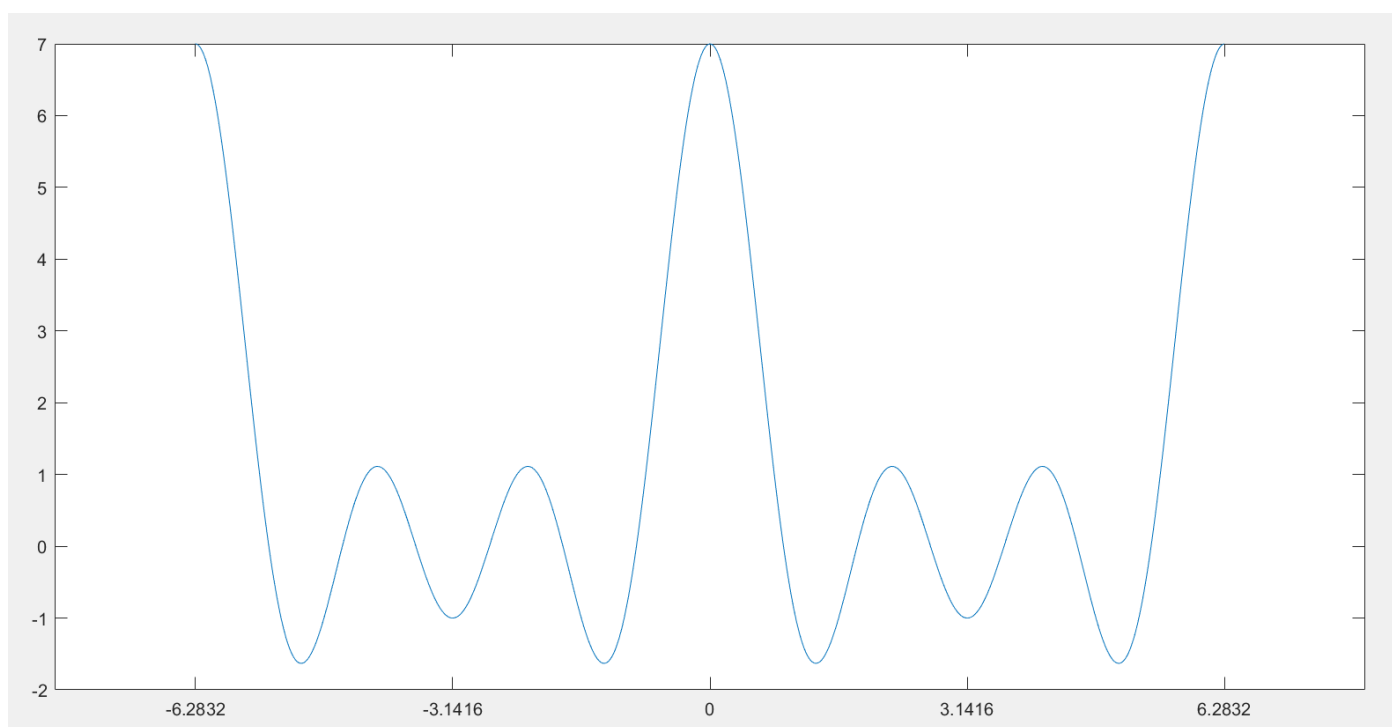
Q2)

$x(t)$



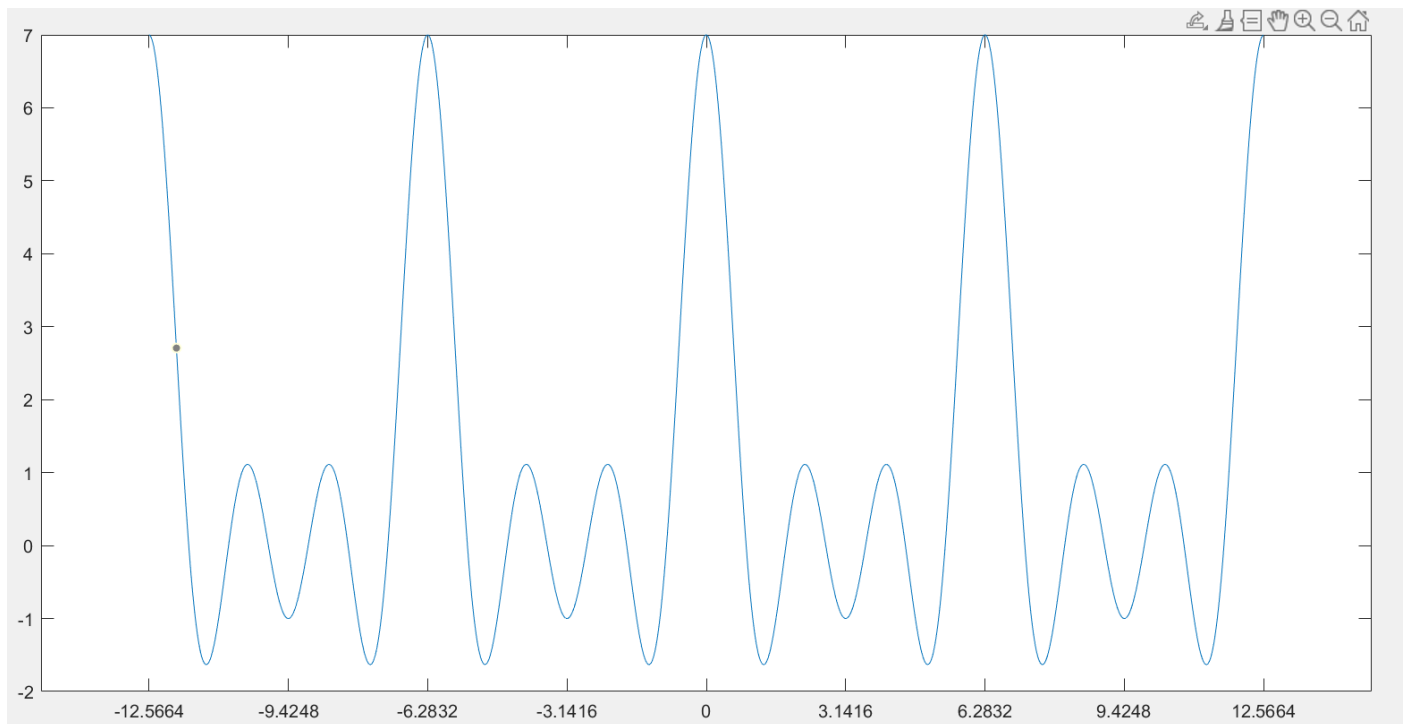
Q5)

$X(j\omega)$



Q6)

$X(j\omega)$ is periodic



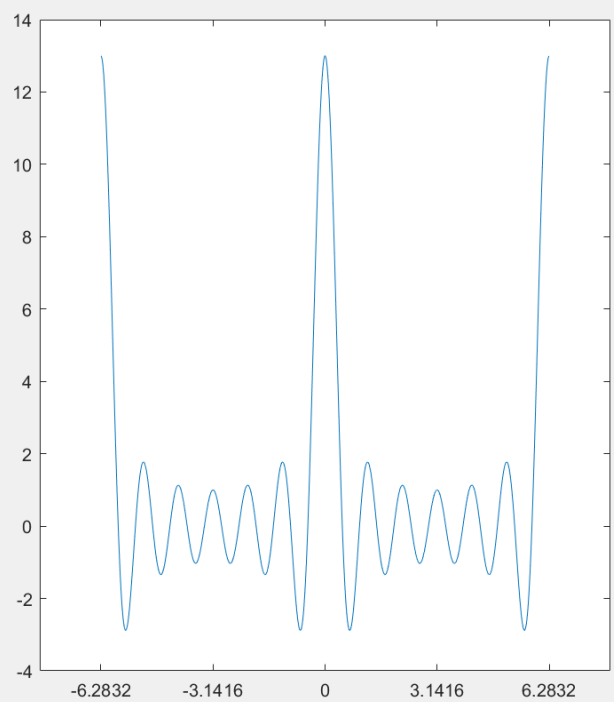
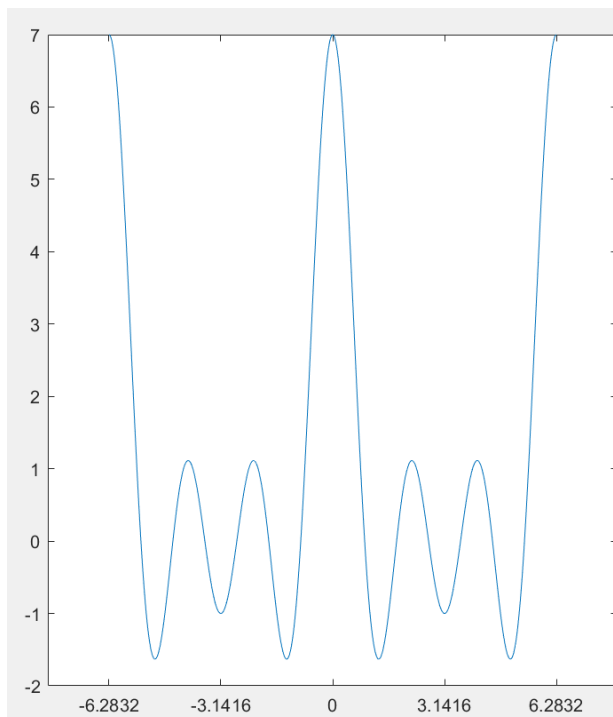
Q7)

$X(j\omega)$ at

$N=3$

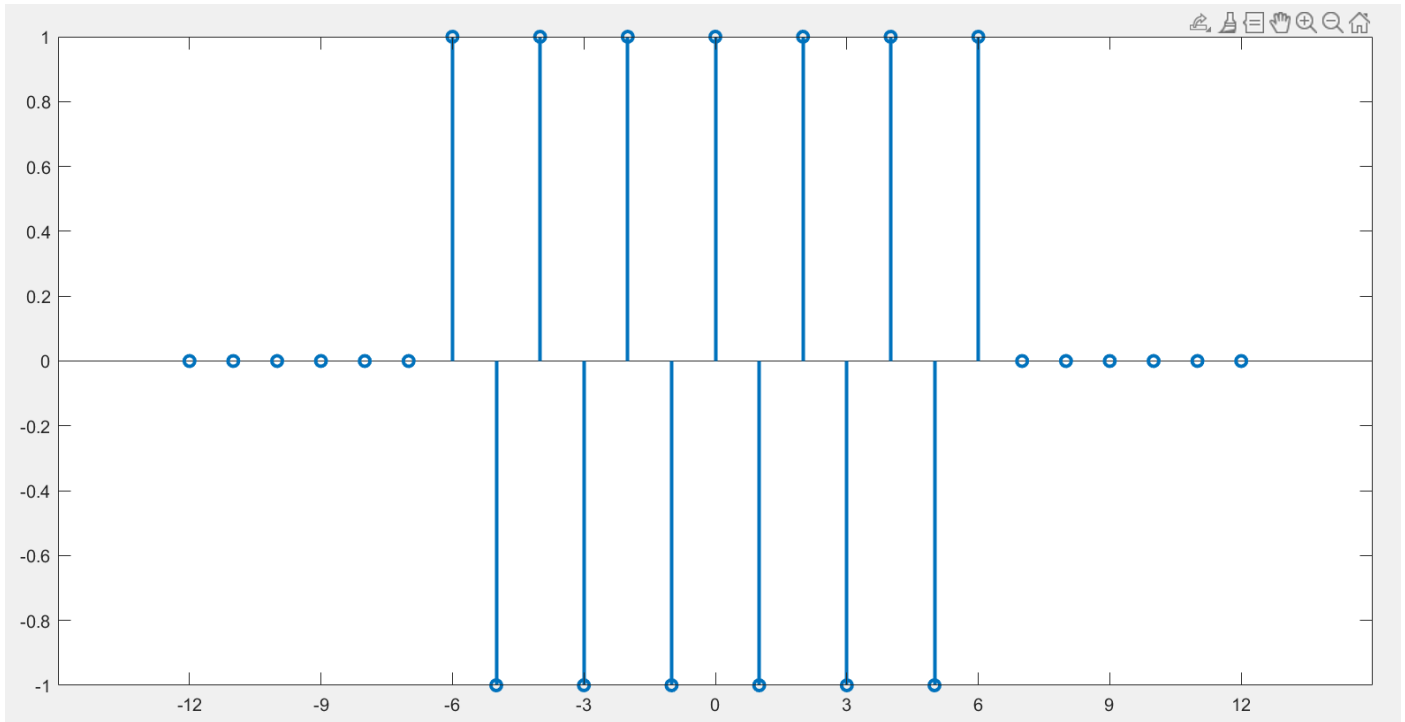
and

$N=6$

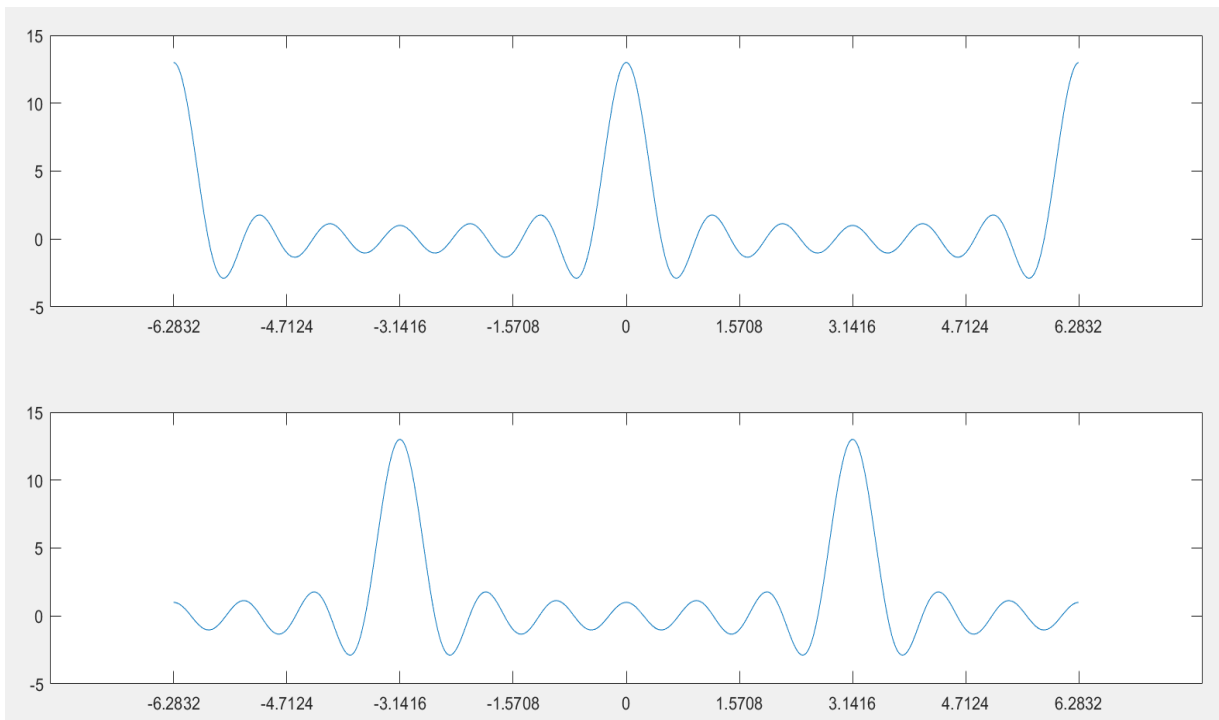


Q9)

$y[n]$, $N=6$



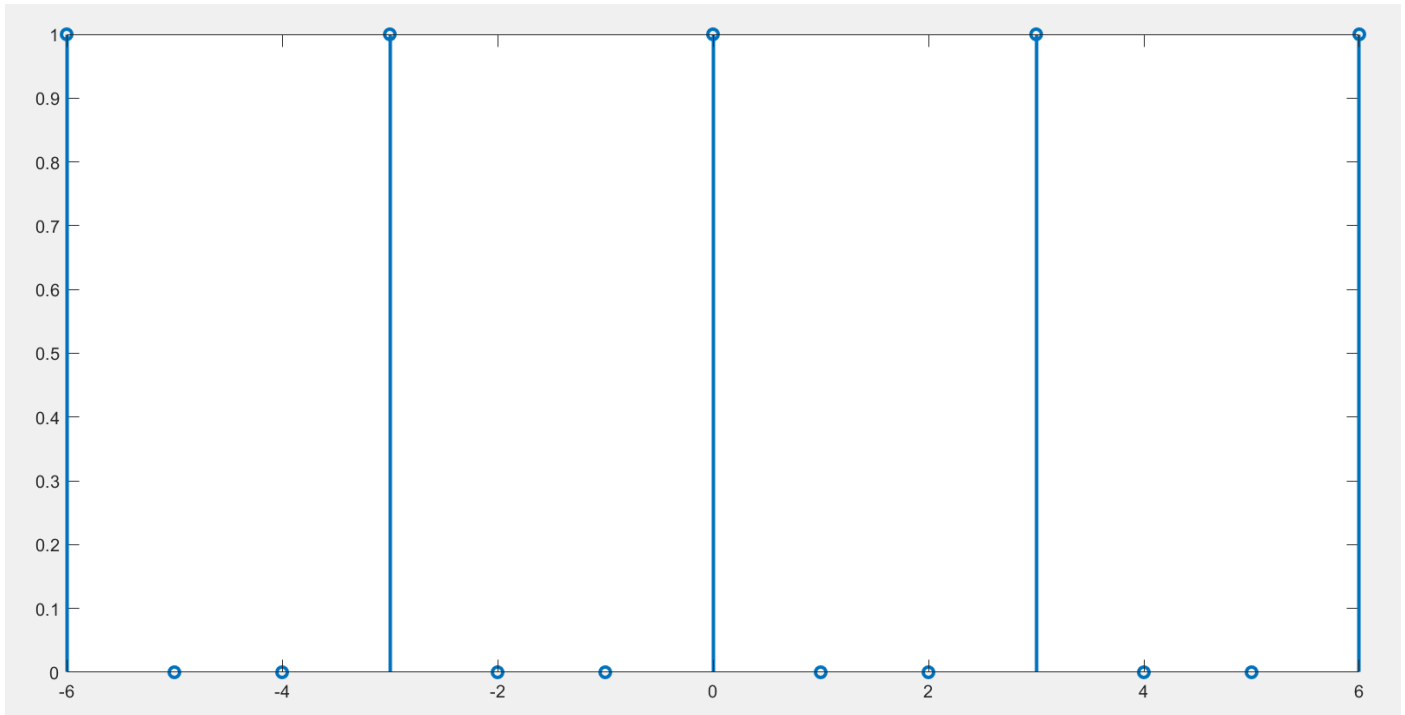
Q10,Q11)



TIME EXPANSION AND INVERSE DTFT

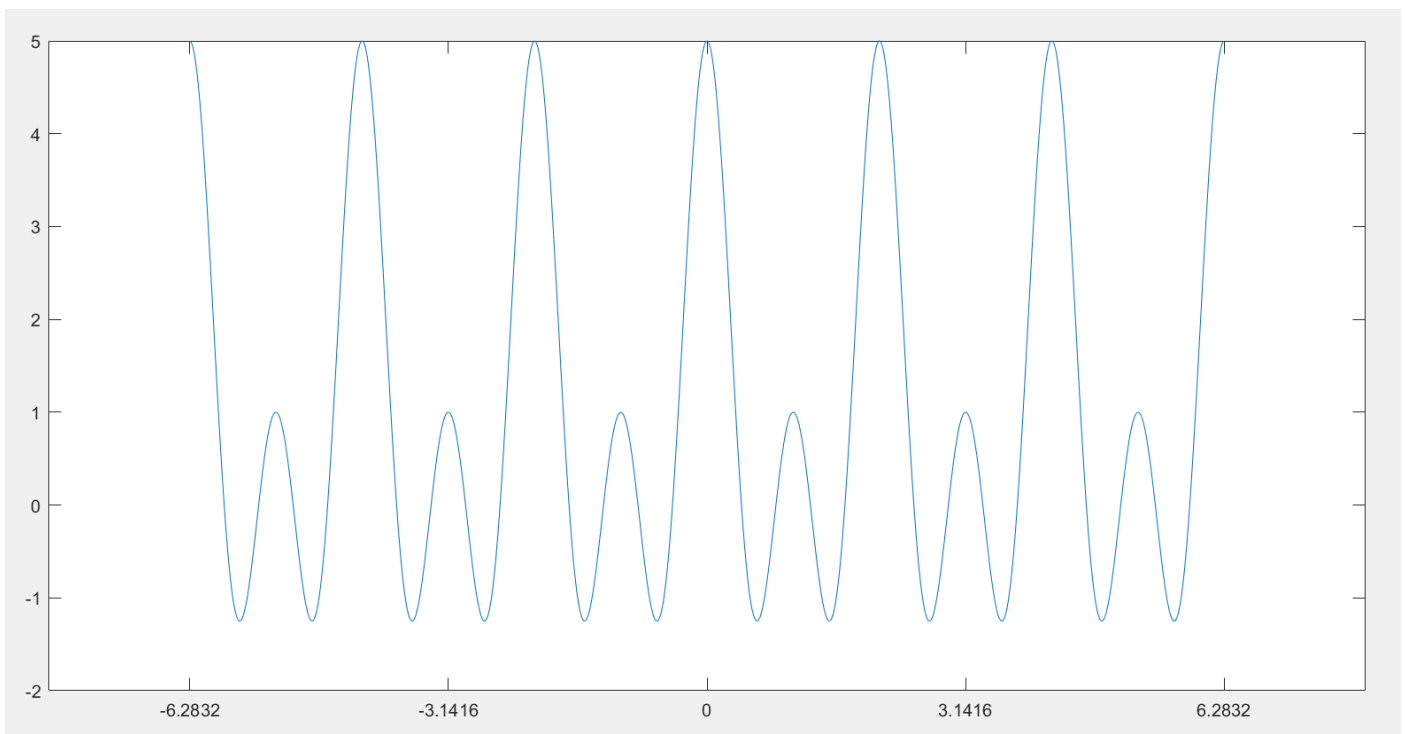
Q3)

$x_3[n]$



Q4)

$X(j3\omega)$



Q6)

Inverse of $X(3j\omega)$

