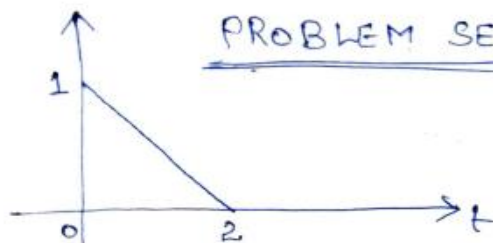


CONVOLUTION
+
FOURIER SERIES

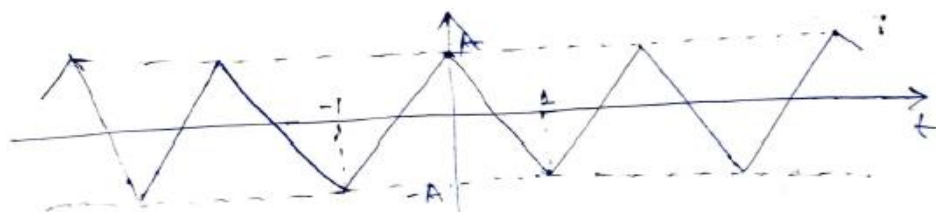
PROBLEM SET



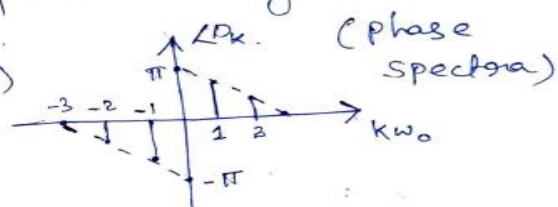
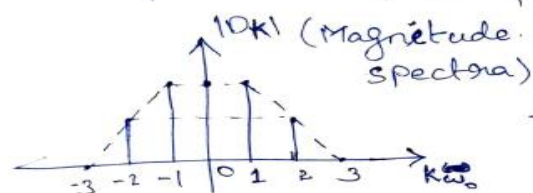
The output of the system is zero everywhere except for the time interval is _____

- ② Sketch the function $f(t) = \frac{1}{t^N + 1}$ and $u(t)$.
Now, find $f(t) * u(t)$ and sketch the result

- ③ Find the exponential Fourier series for the periodic signal $g(t)$



- ④ The following figure shows the exponential Fourier spectra of a periodic signal $x(t)$.



- (a) Find $x(t)$ from the above exponential Fourier spectra