## ECE 343 - Homework \#6

Properties of Fourier Transforms - Summer 2018

1) Find the Fourier Transform for a $50 \%$ duty cycle $1 \mathrm{rad} / \mathrm{sec}$ square wave which is delayed by 1 second Plot $\mathrm{x}(\mathrm{t})$ using it's Fourier series approximation taken out to 20 harmonics ( $\mathrm{n}=1 . .20$ )

2) Find the Fourier Transform for a $1 \mathrm{rad} / \mathrm{sec}$ trapezoid function


Plot $\mathrm{x}(\mathrm{t})$ along with its Fourier approximation taken out to the 20th harmonics

