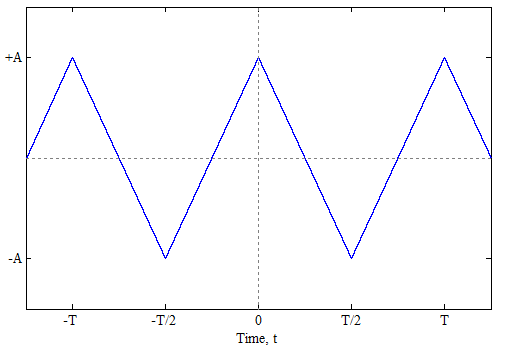
**CMPE 352 – Signal Processing & Algorithms**

**Problem Session3   
Week of 4 March 2019**

**Problem 1**

Consider the triangle signal with period :



1. Find , and to obtain the trigonometric Fourier series expansion of this signal.
2. Find to obtain the exponential Fourier series expansion of this signal.
3. Compare the results obtained

**Problem 2**

1. Write a Matlab code that allows computing and (in the Fourier series expansion) for any .
2. Plot the Fourier series expansion for the fundamental component only:

1. Plot the Fourier series expansion for the fundamental + the 2nd harmonic:

1. Plot the Fourier series expansion up to the 5th harmonic:
2. Plot the Fourier series expansion up to the 20th harmonic.