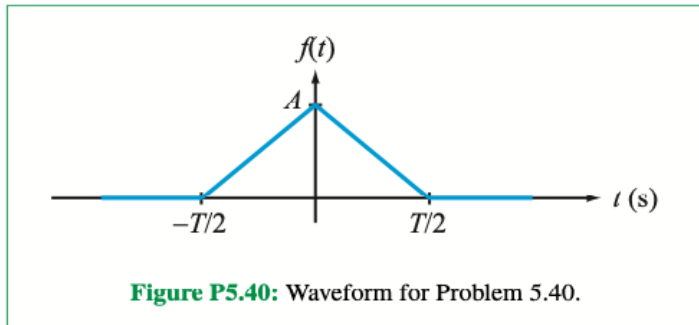


# Homework # 7 EE Signals and Linear Syst.

1.-

Determine the Fourier Transform of the signal in Figure P5.40 below.

**5.40** Waveform in **Fig. P5.40** with  $A = 10$  and  $T = 6$  s.



2.-

**5.52** Let the Fourier transform of  $f(t)$  be

$$\mathbf{F}(\omega) = \frac{A}{(B + j\omega)}.$$

Determine the transforms of the following signals (using  $A = 5$  and  $B = 2$ ):

- (a)  $f(3t - 2)$
- (b)  $t f(t)$
- (c)  $d f(t)/dt$

3.- (Note: This problem substitutes Problem 5.68 in the previous version. )

**5.65** Compute the energy of  $e^{-t} u(t) * \sin(t)/(\pi t)$ .