

**ECE 360 HOMEWORK #1**  
**Due September 11, 2002**

- Homeworks will be collected before the class begins on the due date.
- Office Hours: M,T,F 10:00-11:30 am at 2210 Engineering Building
- Read Chapter 2 from Ambardar.

1. 2.1 from Ambardar
2. 2.9 (b,c,d,e,f,h,i,j,k,l) from Ambardar
3. 2.11 from Ambardar
4. 2.27 from Ambardar
5. 2.29 (a-d) from Ambardar
6. For each of the signals given, determine mathematically if the signal is even, odd or neither. Sketch the waveforms to verify your results. For signals that are neither, find the even and odd parts of the signal.

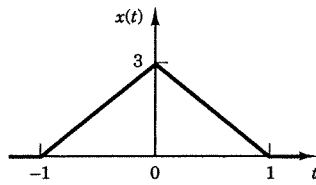
a)  $x(t) = 5u(t)$

b)  $x(t) = 5 + e^{-t} + e^t$

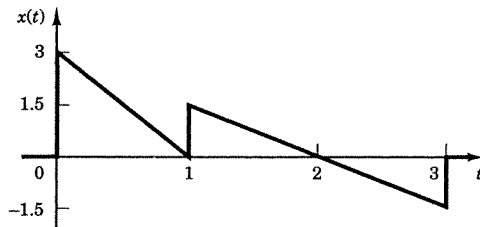
c)  $x(t) = \sin(3t - \pi/2)$

d)  $x(t) = 5 + e^{-t}$

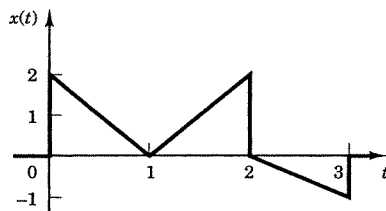
7. Write mathematical functions for the waveforms given below. You can use the singularity functions discussed in class.



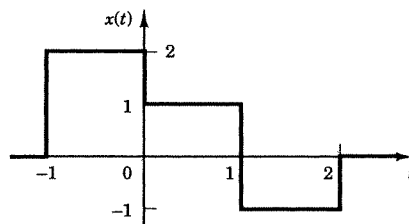
(a)



(b)



(c)



(d)