

Homework Assignment #2 EE312 - Section 1
Due: Monday Feb. 15 at the beginning of class.

Dr. C. Tolle

Additional problems:

Problem 1:

Given the discrete signal $x[n]$:

$$x[n < 0] = 0$$

$$x[0] = 1$$

$$x[1] = 2$$

$$x[2] = 1$$

$$x[n > 2] = 0$$

And a system's impulse response of $h[n]$:

$$h[n < -2] = 0$$

$$h[-2] = 1$$

$$h[-1] = 2$$

$$h[0] = 1$$

$$h[1] = 2$$

$$h[2] = 1$$

$$h[n > 2] = 0$$

a) Is this system causal? Why?

b) Calculate $y[n] = x[n] * h[n]$ {Show each summation step graphically}

Book Problems:

2-6, 2-7, 2-13, 2-16abc, 2-17bce, 2-35, 2-36, 2-37

Computer Problems:

2-1, 2-5