

Name: _____

EE432 Fall 2011 Quiz 4

1. Give an example of a recursive difference equation.
2. Give an example of a non-recursive difference equation and draw the corresponding block diagram.

3. Is the system represented by the following difference equation FIR or IIR? Why?

$$y[n] + x[n] = 0.5 x[n-1] - 0.3 x[n-2]$$

4. Is the system from problem # 3 BIBO stable or not? Show why or why not.

5. Provide a sketch of $u[-1-n]$.

6. Determine the impulse response of the system given by $y[n] - y[n-1] = x[n]$

7. Is the system from problem # 6 BIBO stable or not? Show why or why not.

Bonus: Give the names of 2 of the 3 army commanders that fought in the battle of Waterloo.