

Q39

Prob 1.30 (f, g, j, n)

Note Title

9/21/2014

$$\textcircled{1} \quad y[n] = x[n]x[n-1] \quad \text{invertible?}$$

Ans:

$$\textcircled{2} \quad y[n] = x[1-n] \quad \text{invertible?}$$

Ans:

$$\textcircled{3} \quad y(t) = \frac{d}{dt}x(t) \quad \text{invertible?}$$

Ans:

$$\textcircled{4} \quad y[n] = \begin{cases} x[n/2] & \text{if } n \text{ is even} \\ 0 & \text{if } n \text{ is odd} \end{cases} \quad \text{invertible?}$$

Ans:

* Question for the teams

Consider a sliding window averaging system

$$y[n] = \begin{cases} \frac{1}{\min(5, n) + 1} \sum_{k=\max(0, n-5)}^n x[k] & \text{if } n > 0 \\ x[n] & n \leq 0. \end{cases}$$

Ans: