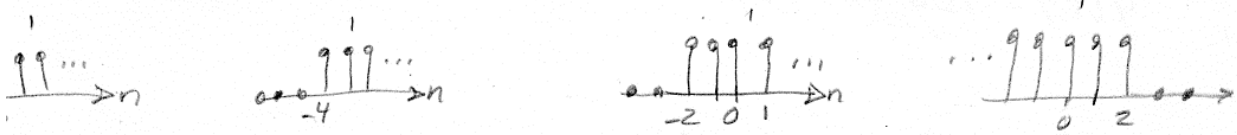
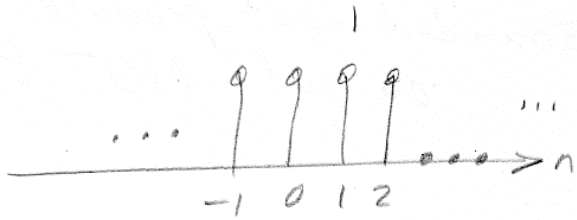
Name: Key

EE322 Fall 2012 Quiz 02
Be sure to label your axes.

1. Plot $u[4-2n]$. $= u[-2n+4]$

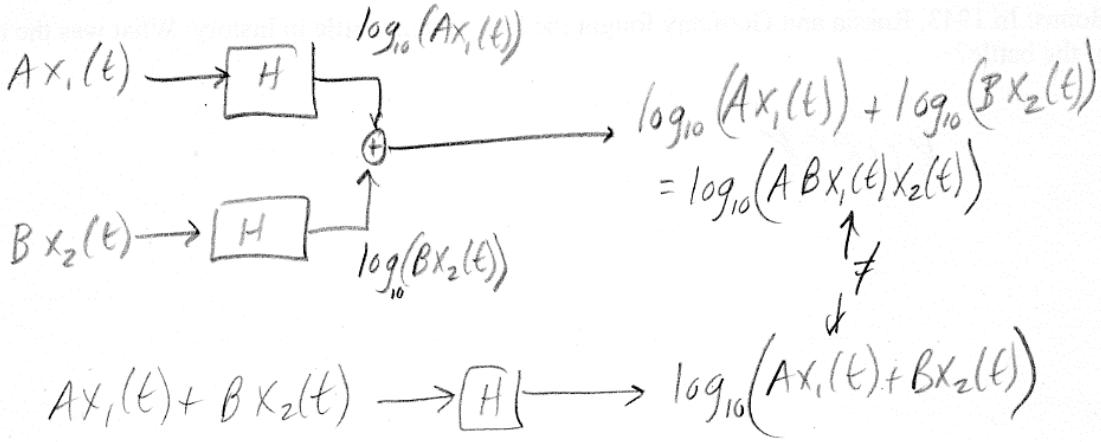
$$u[n] \xrightarrow[n \to n+4]{} u[n+4] \xrightarrow[n \to 2n]{} u[2n+4] \xrightarrow[n \to -n]{} u[-2n+4]$$





2. A system is defined by $y(t) = \log_{10}(x(t))$

   a. Prove whether this system is linear or not.



NOT Linear

b. Is the system BIBO stable? Prove why or why not.

$y(t) = \log_{10}(x(t))$

if $x(t) = 0$, $y(t) = -\infty$

Bounded input produces an unbounded output - NOT BIBO STABLE

Bonus: In 1943, Russia and Germany fought the largest tank battle in history. What was the name of the battle?

KURSK