

→ SPNS. 3/9/2015

$$f: y[n] = \cancel{2u[n]} \quad 2 \cdot u[n-1]$$

① ADDITIVITY

input: $u_1 = [1, 2, 3, 4, 5]$ \rightarrow output: $y_1 = [4, 6, 8, 10]$
 $u_2 = [10, 11, 12, 13, 14]$ $y_2 = [22, 24, 26, 28]$

$$u_1 + u_2 = [11, 13, 15, 17, 19]$$

$$y = \underset{u_1 + u_2}{[-, 26, 30, 34, 38]}$$

$$y_1 + y_2$$

$$[-, 26, 30, 34, 38]$$

② Homogeneity

$$c=2$$

$$2u_1 = [2, 4, 6, 8, 10]$$

$$\downarrow (f)$$

$$y = [-, 4, 8, 12, 16, 20]$$

$$2 \cdot y_1$$

$$= [-, 4, 8, 12, 16, 20]$$