⑤ Difference

$$x[n] \xleftrightarrow{\text{F.S}} a_k, \frac{2\pi}{N}$$

$$y[n] = x[n] - x[n-1]$$

$\longleftarrow$

⑥ Parseval's relationship (Power conservation Law)

HW8Q68   Prob 3.30 (a,b)

$$x[n] = 1 + \cos\left(\frac{2\pi}{6}n\right) \qquad y[n] = \sin\left(\frac{2\pi}{6}n + \frac{\pi}{4}\right)$$

Q: Find the DTFS of $x[n]$ & $y[n]$

Ans:

HW8Q69

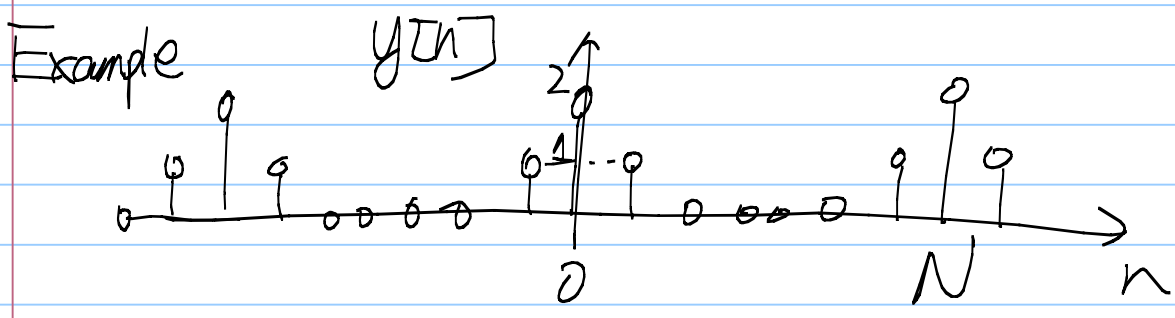Q: $z[n] = x[n] \cdot y[n]$. Find the FS of $z[n]$

Ans:

Example: For a given

$$x[n] = \sum_{m=-\infty}^{\infty} \delta[n - mN]$$

Plot $x[n]$ & Find the F.S.

Ans:

Ans:

Example   y[n]

Find the F.S of y[n]

Ans: