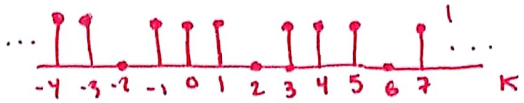
Let a_k be drawn as below:



Find the corresponding signal $x[n]$

Soln: $x[n] = \sum_{k=-1}^{2} a_k e^{jk\frac{2\pi}{N}n}$ and we see $N = 4$

$$= 1 \cdot e^{-j\frac{2\pi}{4}n} + 1 + 1 \cdot e^{j\frac{2\pi}{4}n}$$

$$= 1 + 2\cos\left(\frac{2\pi n}{4}\right)$$