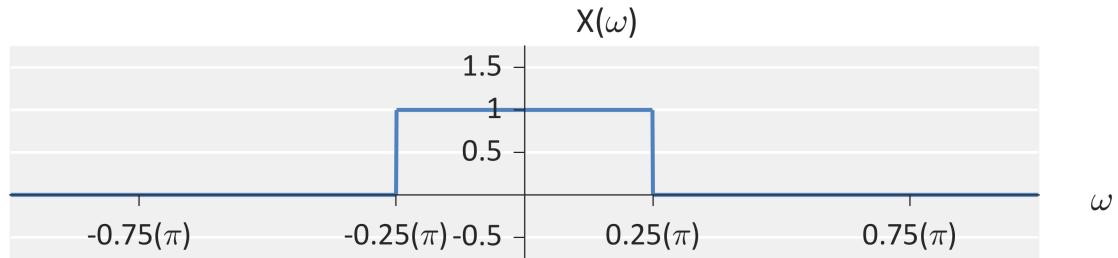


Question #1: Given the following DTFT of $x[n]$, answer the following questions.

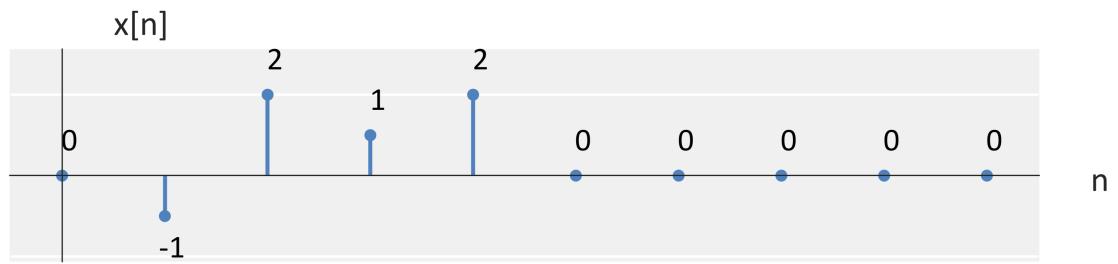


(a) Sketch the DTFT (in the range of $-\pi$ to π) of $x[n] \cos\left(\frac{\pi}{2}n\right)$

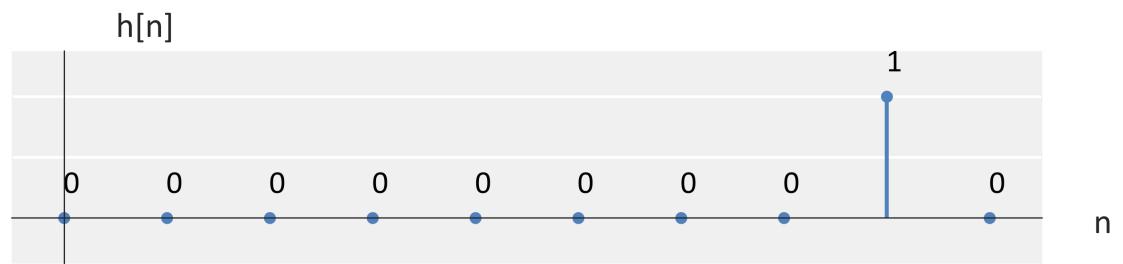
(b) Sketch the DTFT (in the range of $-\pi$ to π) of $x[n] \cos((7/8)\pi n)$

(c) Sketch the DTFT (in the range of $-\pi$ to π) of $x[n] \cos(2\pi n)$

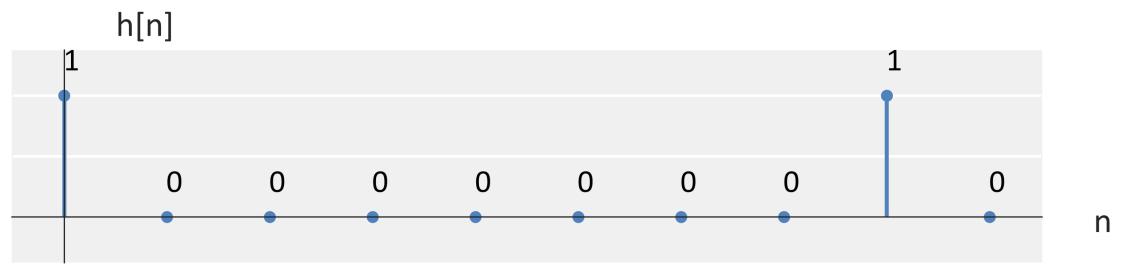
Question #2: For each part of this question, consider the following signal $x[n]$.



(a) Compute $x[n] \circledast h[n]$ for $h[n]$ below (defined for one period from $0 \leq n \leq 9$).



(b) Compute $x[n] \circledast h[n]$ for $h[n]$ below (defined for one period from $0 \leq n \leq 9$).



(c) Compute $x[n] \circledast h[n]$ for $h[n]$ below (defined for one period from $0 \leq n \leq 9$).

