1-a，5%，[1, 0, 2, 0] circular convolution [1, -1, 0, 0]

1-b，5%，[1, 0, 2] 內積 [1, -1]，答案是否跟上一題一樣?

2-a，5%，overlapping add or save

一張含有 文字, 圖表, 行, 螢幕擷取畫面 的圖片

自動產生的描述一張含有 文字, 圖表, 字型, 行 的圖片

自動產生的描述

2-b，10%，how add or save work? Why FFT can speed up linear convolution?

3-a，5%，x[n] = [-0.5, 2, 1, 0.5]，求其autocorrelation

3-b，5%，autocorrelation的max value，l = ?

4，10%，x[n]，0≤ n≤ N-1，wk = 2πk/M，M>N，0≤ K≤ M-1，be achieved by zero padding.

i.e. appending M-N zeros to the end of the sequence x[n] and then performing length-M DFT on this new sqeuence.

5-a，10%，White Noise的定義

5-b，5%，AR(1)是White Noise，p = ?

6，5%，多少dB increase for each addition bit added to the world length of quantized digital sample.

7，5%，選擇題，Kaiser、Hamming，選擇錯誤的敘述。

(a) Kaiser windows is derived from optimization criterion

(b) Hamming windows is a cosin-shape window.

(c) Kaiser 用參數調整平衡

(d) Hamming windows has the narrowest possible main-lobe of all windows 當長度一樣時

8-a，10%，名詞解釋，spectrogram

8-b，10%，名詞解釋，power spectral density

9，5%，選擇題，White noise varience is 𝜎𝑒^2，其power spectral density is ( )，答案應該是𝜎𝑒^2|H(e^jw)|^2