Unit 14 - Week 11 Examples on DFT and DFT

Assignment 11

Due on 2020-04-15, 23:59:59

1. The DFT of a 3-input signal x[n] is to be found as
   \[ X[k] = \sum_{n=0}^{N-1} x[n] e^{-j2\pi kn/N} \]

2. The inverse DFT of X[k] is
   \[ x[n] = \frac{1}{N} \sum_{k=0}^{N-1} X[k] e^{j2\pi kn/N} \]

3. Consider the signal x[n] = a[n] + b[n]. Is \( a[n] \) or \( b[n] \) in DFT?
   \[ x[n] = a[n] + b[n] \]

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5. Consider the signal x[n] = a[n] + b[n]. Is \( a[n] \) or \( b[n] \) in DFT?
   \[ x[n] = a[n] + b[n] \]

6. Consider the signal x[n] = a[n] + b[n]. Is \( a[n] \) or \( b[n] \) in DFT?
   \[ x[n] = a[n] + b[n] \]