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CSCI-B 456

Assignment 3

* + 1. Assuming the box function has an amplitude of 1

1. Sifting property of 2D impulses
   1. , set i and j s.t. is reached
   2. **🡨 Function shifted to location of impulse**
2. Show that the 2D DFT is a linear operator
   1. 2D DFT:
   2. A function is linear if, for all functions , and
3. Show validity of 2D DFT pairs:
4. Period and Frequency
   1. 0 0 1 **0 0 1** 0 0 1 …
      1. Period = # of 1s and 0s between first 1 of one segment to first 1 of next, excluding first 1, including second
      2. Period = 3 (0 0 1)
      3. Frequency =
   2. 0 0 1 **1 0 0 1** 1 0 0 1 1 …
      1. Period = 4 (1 0 0 1)
      2. Frequency =