

Quiz

1. Given a block image x_{n_1, n_2} , with $n_1 \in \{0, \dots, N_1 - 1\}$ and $n_2 \in \{0, \dots, N_2 - 1\}$, what is the value of $c_{k_1=0, k_2=0}$?
 - A. 1 (whatever the image block is).
 - B. the average of the image block entries, up to a normalizing factor.
 - C. the imaginary part of the image block entries
 - D. the input block turned 90° counter clockwise
2. Consider an image that concatenates $c_{k_1=0, k_2=0}$ for each block. What does this image look like?
 - A. the same image with a smaller spatial resolution
 - B. the same image with a higher spatial resolution
 - C. the downsampled image
3. Can 2D-DCT be put into a matrix form such as $c = \Phi x$? and why?

True

False
4. What are the differences/similarities between the classical (sampling+compression) approach and sparse approximation?
5. Σ_s is
 - A. a union of subspaces of dimension s
 - B. a union of subspaces of different dimensions
 - C. a subspace of dimension s