

# Assignment (Formula Derivation)

- Given  $k$ , show that the mean square error for LSB-K is

$$\text{MSE}(\text{LSB-}k) = (1/2^{2k}) \sum_{i=0}^{2^k-1} \sum_{j=0}^{2^k-1} (i - j)^2 = \frac{2^{2k}-1}{6}$$

- Type your proof in a word file using mathematical expression
- Submit: both word file and PDF file
- Deadline: 03/29 (Monday) 11:30
- The first 5 correct works receive bonus credits