EE 435
Assignment 7
Spring 2025
Due Friday April 7

Problem 1 Assume the output for all possible inputs to an 8-bit DAC with V_{REF}=5V are as given in sheet 1 labeled "Ramp Input Spring 2022" of the linked Excel File.
  a) Determine the offset voltage
  b) Determine the gain error
  c) Determine the INL
(attach the MATLAB code you used to solve this problem).

Problem 2 Assume an input of 2.5 + 2.4sin(1000t) was applied to an ADC with V_{REF}=5V and 512 uniformly spaced samples were taken over exactly 11 periods of the input. The samples appear in Sheet 2 of the linked file.
  a) Obtain the spectral response of the ADC
  b) Determine the SFDR of the ADC
  c) Determine the THD of the ADC
 (attach the MATLAB code you used to solve this problem).