Let $y_n$ be the quantizer output. Plot 100 points of $x_n$ and $y_n$ (e.g., for $n = 1000$ to $1099$) on the same graph.

6c. (10%) Determine the mean squared error between the $x_n$ and its quantized version $y_n$, i.e., determine average of $(x_n - y_n)^2$.

6d. (10%) Now put $x_n$ through the A-law compressor (with default $A = 87.56$), quantize to 9 levels and A-law expansion to get output $z_n$. What is the average of $(x_n - z_n)^2$?

6e. (10%) Same as part (d) but use the $\mu$-law compressor (with default $\mu = 255$). Let the output be $q_n$. What is the average of $(x_n - q_n)^2$?