Q1：

Given : Optical transmitter (0.8 μm) operates at 1 Gbps, NRZ OOK
A transmitter launches 3 dBm average power. Total fiber loss is 6 dB
Find the received number of photons in 1 bit ?
(Assume there are equal number of 0's and 1's)

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Q2：

Question No. 13 : Conventional CDs used for voice recording employ a sampling rate of 44.1 kHz with 16-bit quantization for each sample. The maximum allowable recording time is 74 minutes and 33 seconds. Every 8 bit of voice data will be encoded as 17 bits (8 bits as voice data + 9 bits for error correction). Given that 8 bits are 1 byte and that 2^{20} bytes are 1 Megabyte (MB), calculate the storage size of a CD in Megabytes. (Round off to the closest value).