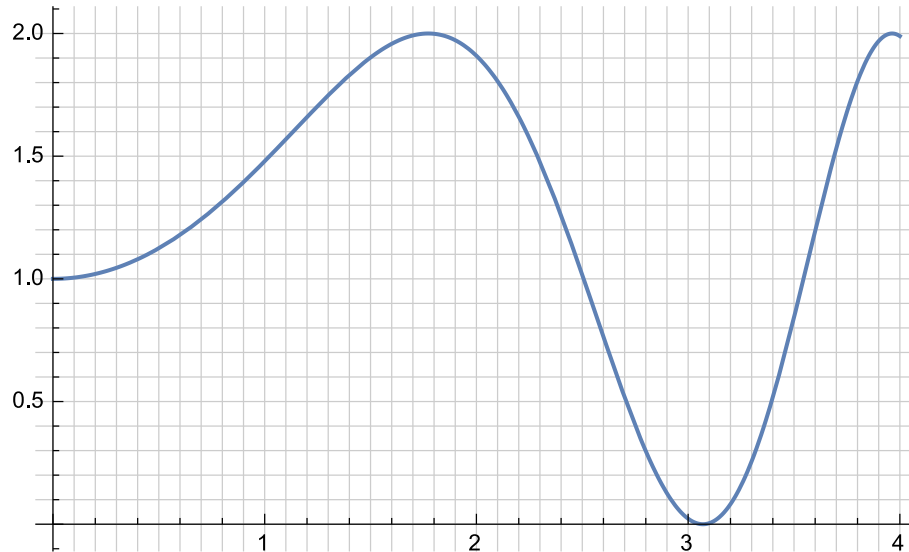


### Homework Assignment 04:

Consider the following sound wave which is 4 seconds long, and its amplitude between 0 and 2.0 volt.



Give its digital representation sampled and quantized at the following sampling rates and quantization resolutions:

- 1 Hz and 2 bits
- 1 Hz and 4 bits
- 2 Hz and 2 bits
- 2 Hz and 4 bits
- 10 Hz and 8 bits

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#### Due 5pm Wednesday, February 4

Either, email an electronic copy to the Instructor ([koc@cs.ucsb.edu](mailto:koc@cs.ucsb.edu)) or the TA ([zhijing@cs.ucsb.edu](mailto:zhijing@cs.ucsb.edu)). Or, deliver a paper copy to the HW Box in HFH 2108. Electronic copy of your homework or lab report can be in Text, PDF or MS Word, or Open Office format. You could also scan/pdf your handwritten work; however, do not send phone-camera images under any circumstances!