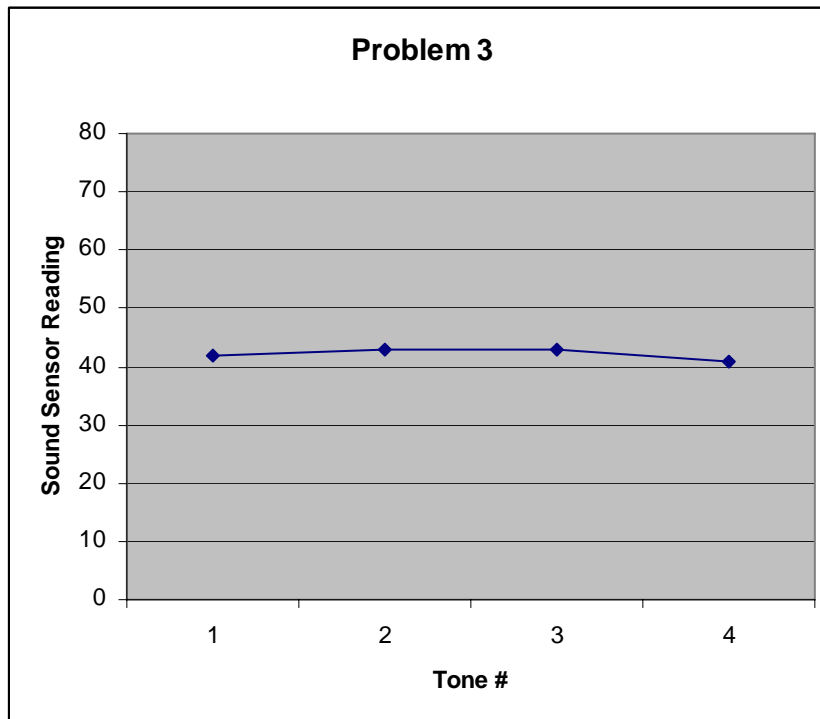


## Quiz: Frequency and Amplitude

### Introduction to Mobile Robotics > Frequency and Amplitude Exploration

1. Amplitude of a sound wave is perceived as (circle the correct answer):
  - i. The volume of the tone
  - ii. The pitch of the tone
  - iii. The timbre of the tone
  - iv. The rhythm of the tone
2. Frequency of a sound wave is perceived as (circle the correct answer):
  - i. The volume of the tone
  - ii. The pitch of the tone
  - iii. The timbre of the tone
  - iv. The rhythm of the tone
3. Four tones were played and their values recorded on the graph below.

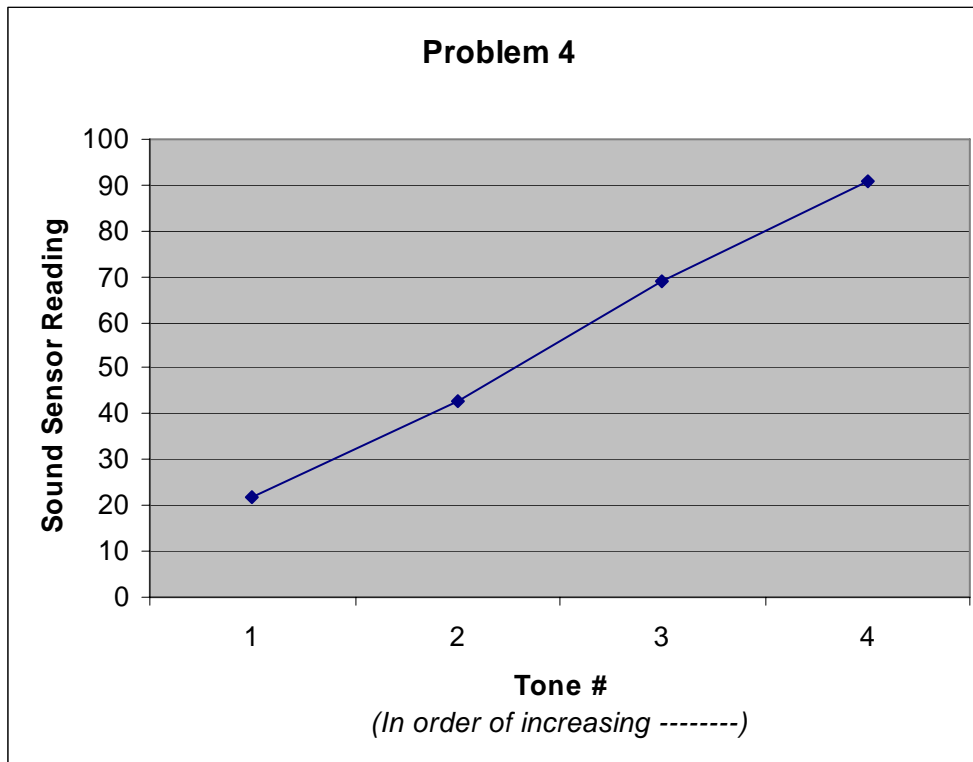


- i. Did the Sound Sensor detect any difference between the tones? Explain.
- ii. Does this prove conclusively that the tones were the same, different, or neither? Explain.

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4. Four tones were played and their values recorded on the graph below. The tones were labeled “In order of increasing -----”, but unfortunately, the last word was too smeared to read.



- i. Did the Sound Sensor detect any difference between the tones? Explain.
- ii. Is there a clear pattern to the way in which the Sound Sensor values changed based on the differences between these four tones? Explain.
- iii. Does this pattern resemble the results you got for either frequency or amplitude in the Frequency and Amplitude Exploration?

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