

Physics 231 - 3-Dec-99



- Announcements
- Sound
 - Speed, wavelength and frequency
 - Intensity
 - Interference & Beats
- Quiz

Sound



- Speed, wavelength and frequency

Sound Intensity



Interference and Beats



- $\sin(A) + \sin(B) = 1/2 \sin((A+B)/2) \cos((A-B)/2)$

Q1 - Answer = c

Q2 - Problem A - Last name A-K

You ask your roommate to turn his boom box down 3 dB and he complies. By what factor is the sound intensity reduced?

- A. 2
- B. 3
- C. 4.6
- D. 100
- E. 1.3

Q1 - Answer = c

Q2 - Problem B - Last Name L-Z

- The dynamic range (loudest sound to softest) of a CD recording is said to be 90 dB. What is intensity of the softest sound that can be reproduced if the loudest is 0.3 W/m^2 ?
 - A. $3.3 \times 10^{-3} \text{ W/m}^2$
 - B. $3 \times 10^{-8} \text{ W/m}^2$
 - C. $3.7 \times 10^{-5} \text{ W/m}^2$
 - D. $5.3 \times 10^{-11} \text{ W/m}^2$
 - E. $3 \times 10^{-10} \text{ W/m}^2$