Acoustics Worksheet Answer Key

1. Calculate the wavelengths at the standard octave band center frequencies for sound moving through air.

Distance between similar points on a successive wave

$C=f\lambda$ or $\lambda=C/f$

C=velocity (fps)
f=frequency (hz)
λ=wavelength (ft)

Lower frequency: longer wavelength

1. Calculate the wavelengths at the standard octave band center frequencies for sound moving through air.

Hz	62.5	125	250	500	1000	2000	4000	8000
Ft	18.1	9.04	4.25	2.26	1.13	0.57	0.28	0.14

Calculated for “center band frequencies” See S&R p. 730

125 250 500 1000 2000 4000

Pay specific attention to 125 hz and 500 hz