Do Now 9-25

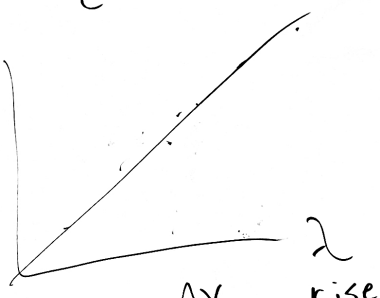
If you reduce the frequency of a sound by a factor of 2. What happens to the wavelength? x 2

What about the wave speed? same

$V = \lambda f$

$V = \lambda / T$

what the slope means (different approach)



$\text{slope} = \frac{\Delta y}{\Delta x}$ $\frac{\text{rise}}{\text{run}}$

$\frac{T}{\lambda} = \frac{1}{V}$

wave

Peri

velo

freq

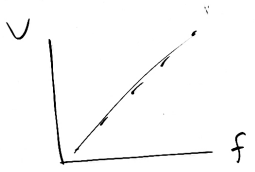
wavelength (meters) λ

Period (sec) T

velocity ($^{m}/_{s}$) V

frequency (Hz) ($\frac{1}{s}$) f

$\frac{T}{\lambda}$ $\frac{[s]}{[m]}$ | $\frac{1}{V}$ $\frac{1}{m/s}$ $\frac{s}{m}$



$V = \lambda f$

$\frac{V}{f}$ $\left[\frac{m/s}{1/s}\right] \rightarrow [m]$

$\frac{V}{f} = \lambda$

Agenda

Review graphs

Notes Sound

CW 9-25

Objectives

- Explain how sound is produced
- Relate frequency to pitch

Do Now 9-25

If you reduce the frequency of a sound by a factor of 2. What happens to the wavelength? x 2

What about the wave speed?

same

Pitch - frequency of a sound

Human hearing 20 Hz - 20,000 Hz

wavelength

Period

velocity

frequency