

## Music 170: Formulas for week 2

### Definitions

### Wavelength and frequency

The wavelength of a sound (written  $\lambda$ ) depends on its frequency:

$$\lambda = v/f$$

where  $v$  is the sound's velocity and  $f$  is its frequency in cycles per second. The velocity of sound in air is about 343 meters per second.

The period of anything that repeats (such as a sinusoid) is the time for it to make one entire cycle:

$$\tau = 1/f$$