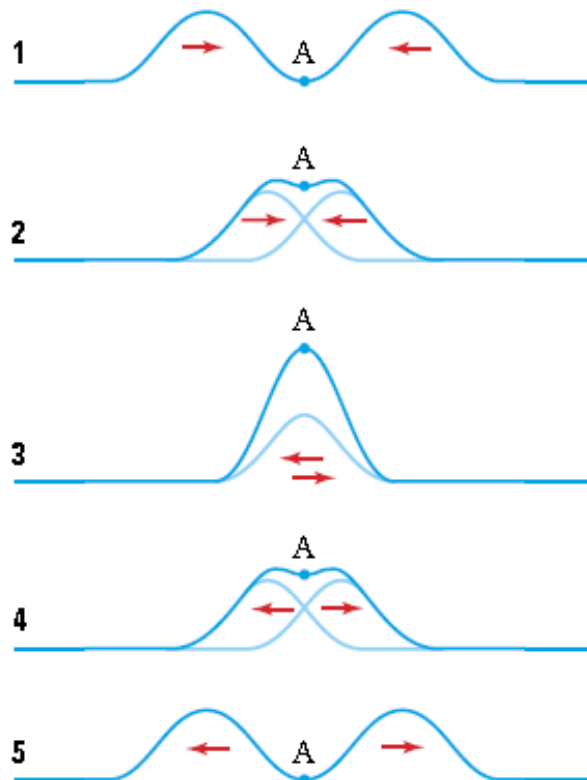


Interference of Waves

- if waves are transferring energy thru a medium, these 'energies' can interact
- each wave affects the medium independently
- the 'resultant' wave is the SUM of the displacements of each component wave

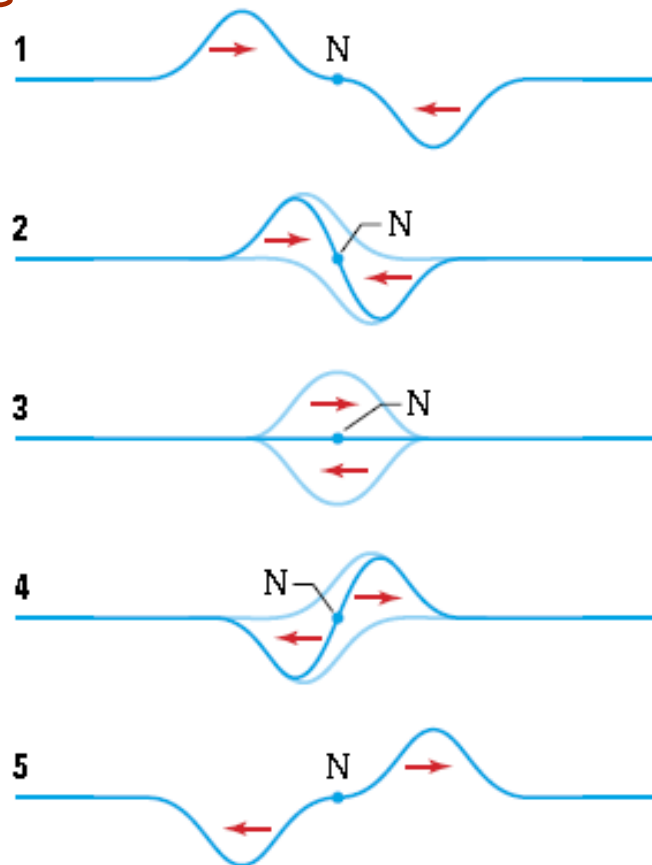
Dec 13-8:43 PM

Constructive



Feb 7-1:29 PM

Destructive

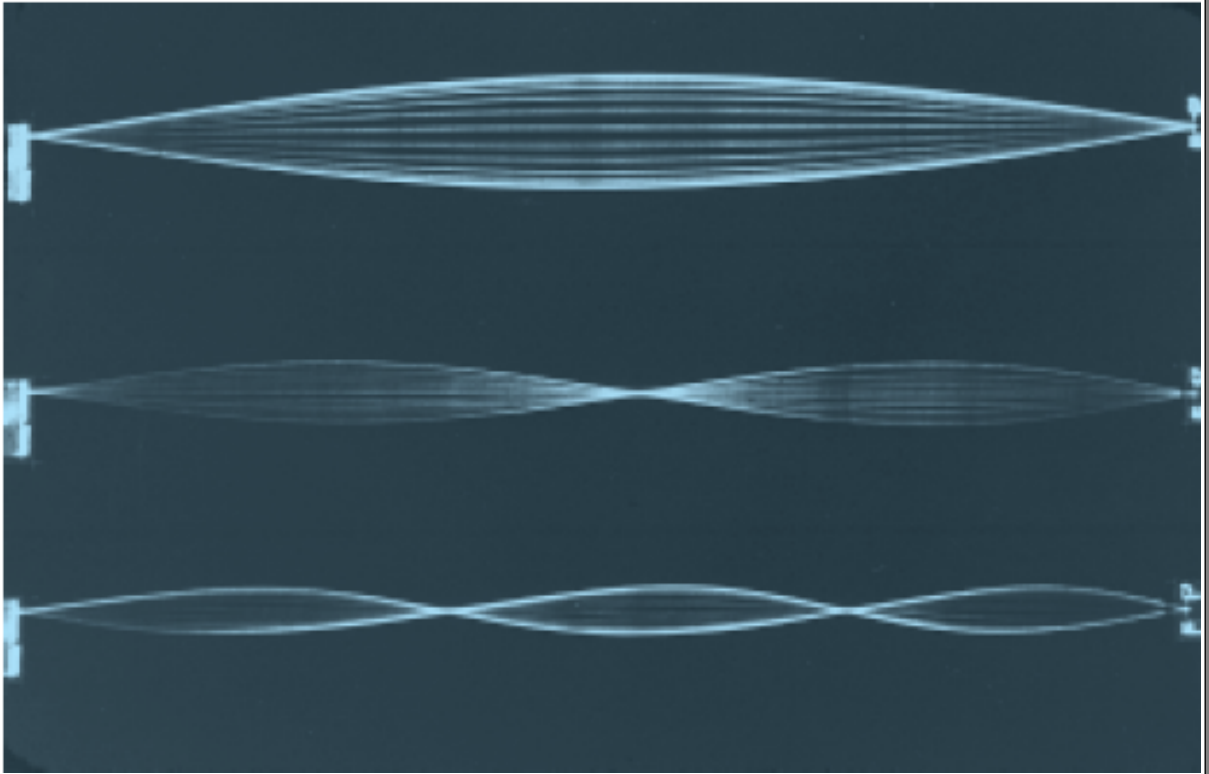


Feb 7-1:29 PM

Standing Waves

- for every medium of a fixed length, there are many **natural frequencies** of vibration that produce **resonance**
- the lowest natural frequency, (longest wavelength) is called the **fundamental frequency**
- fundamental frequency has the fewest number of nodes and antinodes, usually $1/2$ wavelength
- each multiple thereafter is called an **overtone** and achieved by adding one more node to the standing wave pattern

Dec 13-8:51 PM



Dec 14-7:43 AM