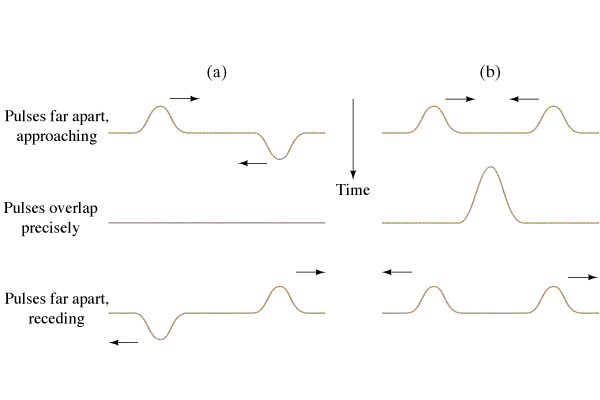
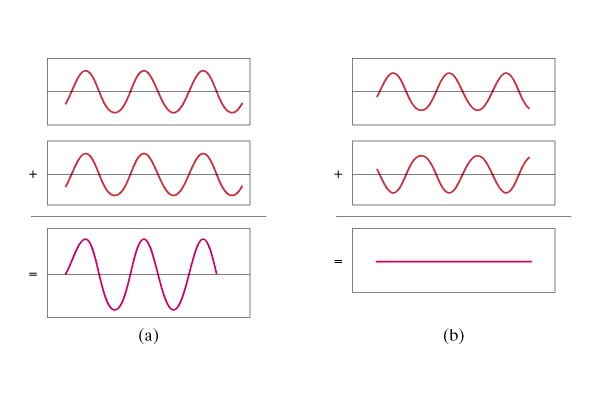
**Noteguide for Superposition and Interference (Videos 12DE) Name**

**12D: Superposition:**  (Overlapping waves add)

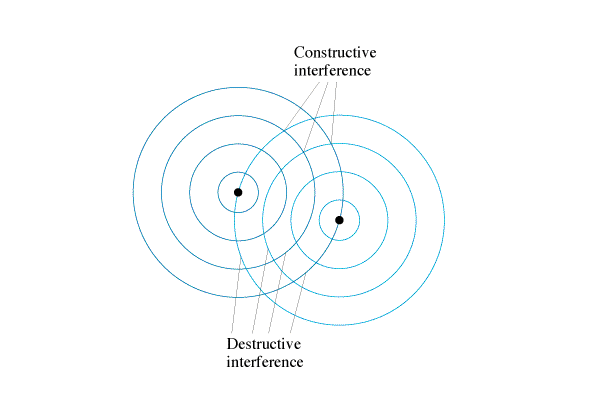
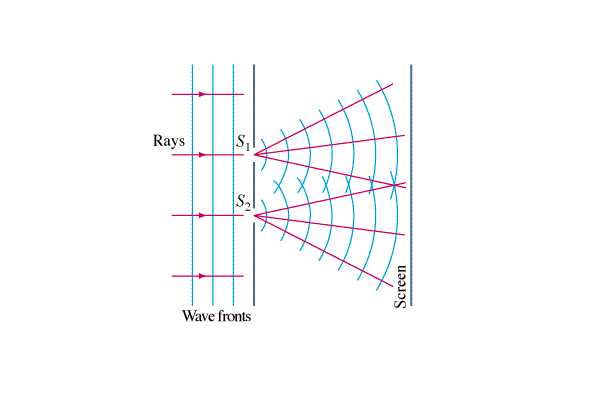
Examples:

**12E: Interference:**

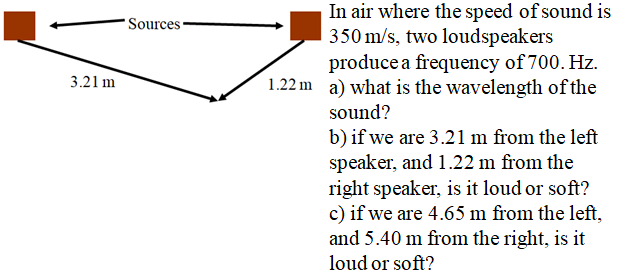
 

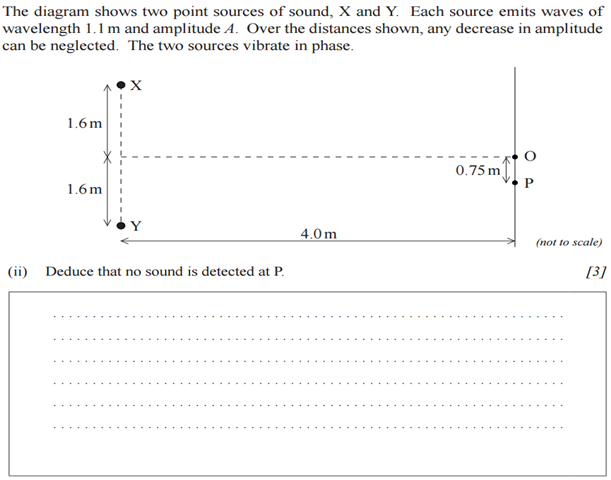
|  |  |
| --- | --- |
| Wavelength rule for constructive interference: | Wavelength rule for destructive interference: |

Other Examples:

Example Problem:





Whiteboards:

1. Two speakers 3.0 m apart are making sound with a wavelength of 48.0 cm.

|  |  |
| --- | --- |
| A. What is the frequency of this sound if v = 343 m/s? | B. If I am 2.12 m from one speaker, and 3.80 m from the other, is it loud, or quiet, and how many wavelengths difference in distance is there? |
| C. If I am 5.17 m from one speaker, and 8.05 m from the other, is it loud, or quiet, and how many wavelengths difference in distance is there? | |