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

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

Examples:

**12E: Interference:**

 

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| 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.

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| 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? |