

30.5: Analysis

1. What was required to start each vibration, to make the system vibrate?
2. Which systems in your *sound systems* data table produced an audible sound? List all that apply.
3. For which systems in your *sound systems* data table was there a transfer of energy observed? List all that apply.
4. Assume that 100 paces equals 122 meters.
 - a. Calculate the time for the sound wave to travel from the stakes to the observers, for 100 paces. The average speed of sound is 343 m/s.
 - b. Calculate the time for the light wave to travel from the stakes to the observers, for 100 paces. The speed of light in air is 3×10^8 m/s.
 - c. Use a ratio to calculate how much faster one wave arrives before the other.

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