

Experiment 13

Speed of Sound in Air

1. What is the objective of this experiment? (2 pts.)
2. What is a standing wave? (2 pts.)
3. What is a resonant frequency? (2 pts.)
4. Explain the relationship $v = \lambda f$. (2 pts.)
5. You measure $\frac{\lambda}{2}$ to be 70 cm. The temperature in the lab is 22°C. What is the frequency of the resonance? Refer to equation in question four above and use $v = (331.50 + 0.61T)m/s$. Show all work. (2 pts.)