

Physics 160 Written Homework - Chapter 14-16

1 Wave Mechanics

A $2m$ long wire attached to a ceiling has a block of mass $10kg$ hanging from it. A transverse pulse travels from the bottom to the top of the wire in $0.1s$. Find the mass of the wire. Assume that the tension in the wire is UNIFORM.

2 Sound Waves

Two speakers, A and B, separated by a distance of $3m$, each emit sinusoidal waves in phase. The frequency of waves emitted is $150Hz$. Along the line connecting the speaker's positions, find all points of constructive and destructive interference.