32:40

 $1.\,\mathrm{A}$ string is $20\,\mathrm{cm}$ long and has a mass of $800\,\mathrm{g}$. A wave with frequency $3\,\mathrm{Hz}$ and wavelength $0.40\,\mathrm{m}$ travels along the string. Figure stuff out.

1:11:20

2. A string is tied at both ends. It is 2m long and has mass 4kg and tension 6N. Figure stuff out about the second harmonic.

1:50:50

3. The 3^{rd} harmonic for a pipe open at one end and closed at one end has wavelength 6m. Find the fundamental frequency for this pipe. The speed of sound is 340 m/s.