1 Data

Here is the data for three strings, with two, four, and six beads, respectively. The two and four-bead data is from the day when Dr. Embree couldn’t make it and we all just went to the lab - Erin took the six-bead data on 23 March.

\[
\begin{array}{c|ccc}
N & f_1 (Hz) & f_2 (Hz) & f_3 (Hz) \\
\hline
2 & 33.8 & 22.1 & 22.0 \\
4 & 49.9 & 41.4 & 48.8 \\
6 & 72.4 & 65.3 & \\
\hline
f_5 & 81.2 & 86.2 & \\
\hline
f_6 & & 97.5 & \\
\hline
\sigma & 24.7 N & 24.7 N & 36.3 N \\
\sum l_j & 78.5 cm & 78.5 cm & 78.5 cm
\end{array}
\]

2 Units

Don’t forget that the eigenvalues \( \lambda \) are squares of angular frequencies. You will need to multiply the above frequencies by \( 2\pi \), and then square them.

The other issue is that Dr. Embree’s notes assume that \( \sigma = 1 \). You’ll need to make the units work out.