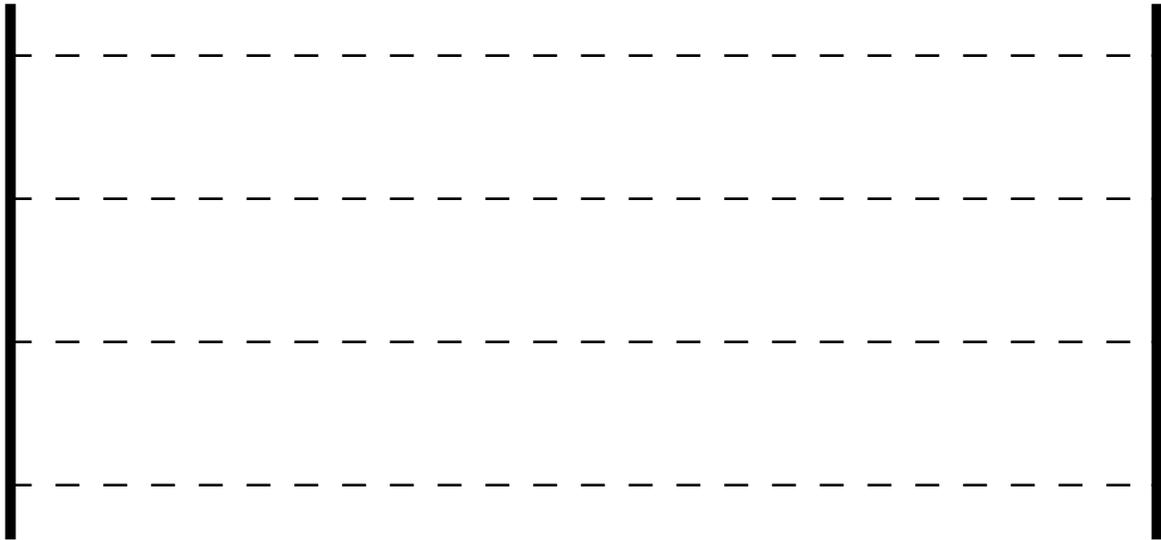
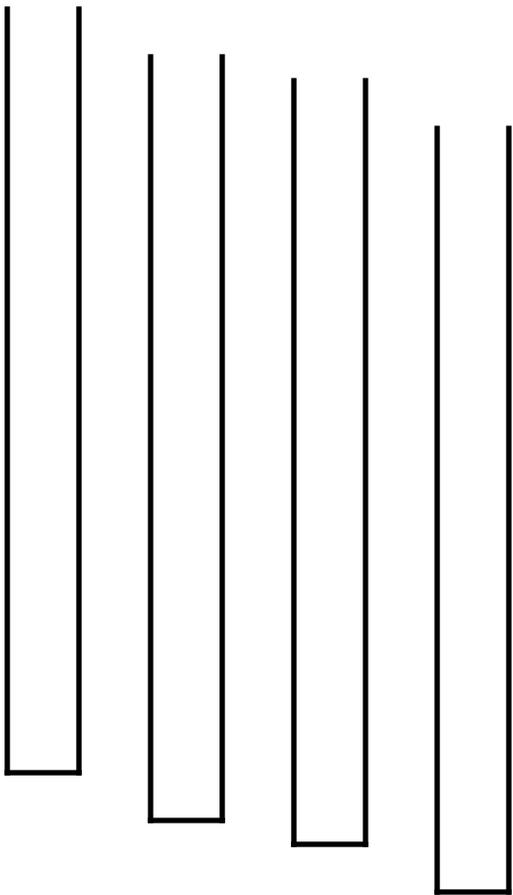


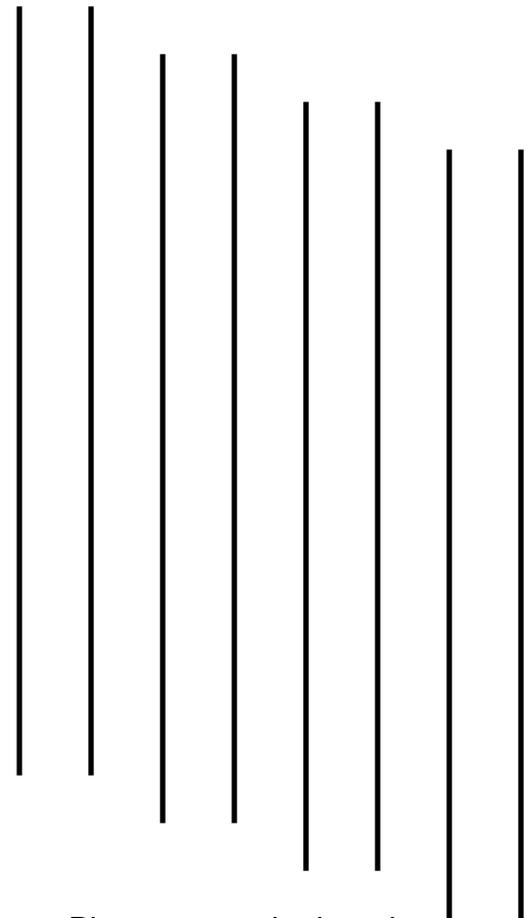
Natural Mode Patterns Exercise



Draw the waveforms for the lowest 4 resonant frequencies of a string fixed at both ends.
 Relate each wavelength to the length of the string. Give the frequency sequence.
 Label each NODE and Anti-NODE



Pipes open at one end.



Pipes open at both ends.

Draw the waveforms for the lowest 4 resonant frequencies of the pipes illustrated.
 Relate each wavelength to the length of the pipe. Give the frequency sequence.
 Label each NODE and Anti-NODE